



**2020 – 2021 Retiming
Before/After Study and Benefit
Cost Analysis
*Orange, Osceola, and Seminole Counties, Florida***

February 2022

Prepared for MetroPlan Orlando
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Introduction

MetroPlan Orlando requested Kittelson & Associates, Inc. (Kittelson) to evaluate several metrics associated with corridor signal retiming projects completed across the metropolitan planning area (i.e., Seminole, Orange, and Osceola Counties) between January 2021 and May 2021. Signal retiming along corridors is a relatively low-cost Transportation Systems Management and Operations (TSMO) strategy that typically results in measurable benefits including reduced vehicle travel time, fuel savings, multimodal benefits, decreased number of stops/slowdowns, smoother signal progression, slower speeds, increased safety, and more. MetroPlan Orlando has been conducting this annual evaluation since 2007 to track the costs and benefits of this TSMO strategy. This study is focused on understanding the costs and benefits of the signal retiming implemented by MetroPlan Orlando in FY 2020/2021.

In FY 2020/2021, MetroPlan Orlando retimed twenty-six (26) corridors and five (5) intersections during school drop-off/pick-up times, as shown in **Table 1**. A full list of the retimed corridors retimed is shown in **Table 2**. Signals were retimed along 25 corridors and at five (5) school intersections within Seminole, Orange, and Osceola Counties. The stand alone intersections are located at schools and were retimed specifically to reduce delay during school drop-off and pick-up times. The locations of each retimed corridor or intersection are shown graphically in **Figure 1**, **Figure 2**, and **Figure 3**.

Table 1: 2020/2021 MetroPlan Retiming Project Summary

	Weekday Only	Weekend Only	Weekday & Weekend	Total
Corridors	20	5	1	26
School Intersections	5	0	0	5

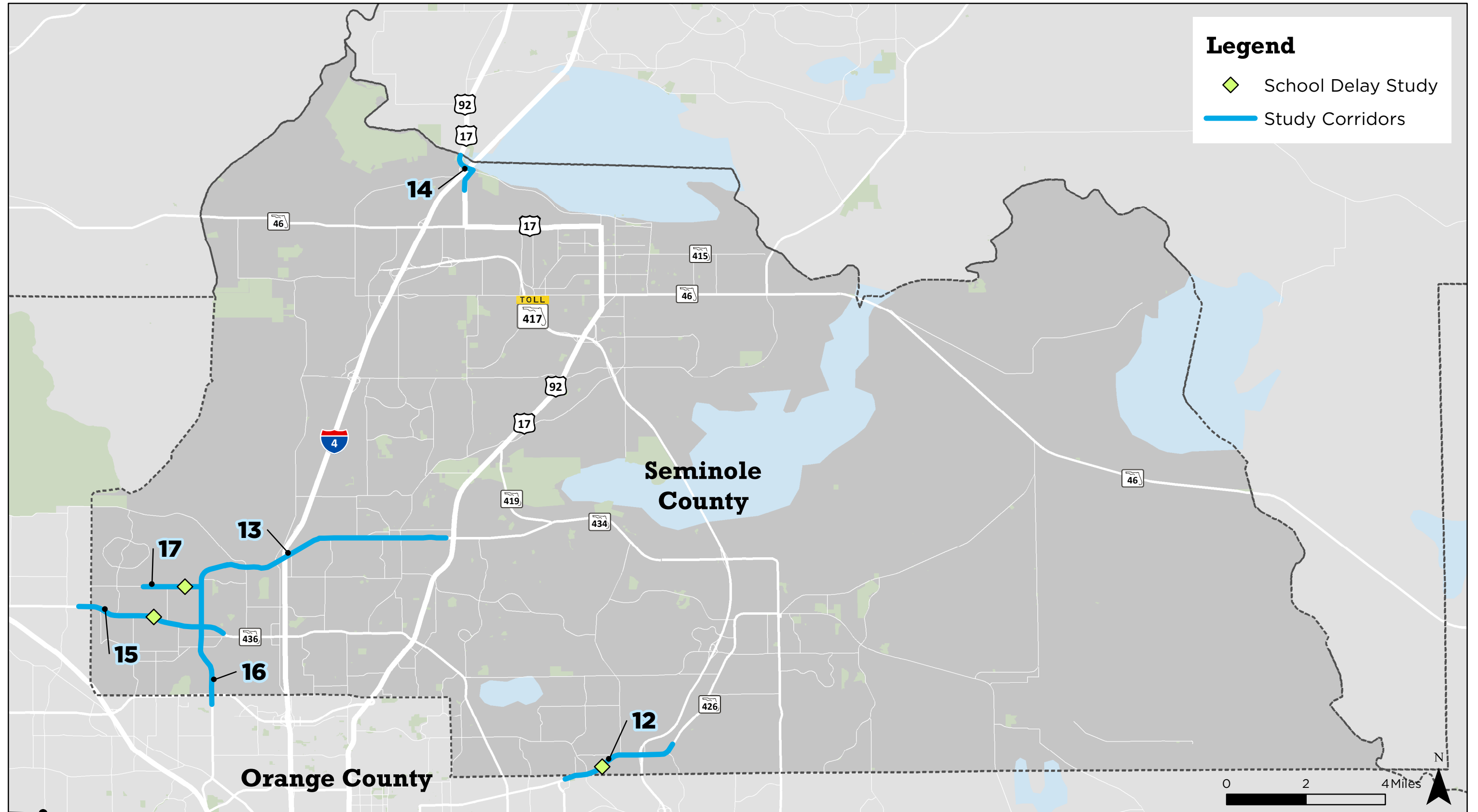
Table 2: 2020/2021 Study Corridors

Corridor No.	Road	Limits	Length (mi.)	County
1	Hiawassee Road	Mardell Court to Raleigh Street	1.9	Orange
2	Metrowest Boulevard	Metrocenter Boulevard to Wilshire Drive	0.4	Orange
3	Universal Boulevard	Hard Rock, Portofino Bay Entrance to I-4 EB Ramps	1.0	Orange
4	Millenia Blvd	Radebaugh Way to Conservatory Lane	0.6	Orange
5	Vineland Road	Radebaugh Way to Walden Circle	0.2	Orange
6	Apopka Vineland Road	Bayside Drive/Torey Pines to Steer Lake Road	2.7	Orange
7	Conroy Windermere Road	Chain of Lakes School to Turkey Lake Road	1.9	Orange
8 ¹	Good Homes Road/Old Winter Garden Road	SR 408 WB Ramps to Ferguson Drive	5.7	Orange
8A	-	SR 408 WB Ramps to Powers Drive	2.6	-
8B	-	Pine Hills Road to Ferguson Drive	1.7	-
9 ¹	West Road/Clarcona Ocoee Road	Ocoee Apopka Road to Rose Avenue	7.1	Orange
9A	-	Ocoee Apopka Road to Apopka-Vineland Road	5.0	-
9B	-	Apopka-Vineland Road to Rose Avenue	2.1	-
10 ¹	Beggs Road/Edgewater Drive	Overland Road to All American Boulevard	2.3	Orange
10A	-	Overland Road to Mott Avenue	1.0	-
10B	-	Mott Avenue to All American Boulevard	1.3	-
11	John Young Parkway	33rd Street/35th Street to C.R. Smith Street	2.0	Orange
12 ²	SR 426	Old Howell Branch Road to Dean Road	2.2	Seminole
13 ²	SR 434	Manor Avenue to Wayman Street	4.6	Seminole
14 ²	US17/92	I-4 WB Ramp to Orange Boulevard	0.6	Seminole
15 ²	SR 436	Line Drive to San Sebastian Prado	2.9	Seminole
16 ²	SR 434	SR 414 to E. Lake Brantley Drive	3.5	Seminole
17 ³	Sand Lake Road	Lake Brantley High School to Oak Haven Road	0.9	Seminole
18	US 192	Turnpike NB Off-Ramp to Old Hickory Tree Road	5.0	Osceola
19	CR 532	Masters Boulevard to Old Lake Wilson Road	2.0	Osceola
20	Good Homes Road	Balboa Drive to White Road	0.3	Orange
21	Pine Hills Road	Balboa Drive to North Lane	2.7	Orange
22	Maitland Avenue	Maitland Boulevard to Horatio Avenue	0.6	Orange
23	Hiawassee Road (Apopka)	Wal-Mart Entrance to Apopka Boulevard	0.3	Orange
24	Hiawassee Road (Orange)	SR 408 EB/WB Ramps to Wekiva High School	6.2	Orange
25	Park Avenue	E 5th Street to US 441	0.1	Orange
26	Vick Road	Old Dixie Highway to US 441	0.1	Orange

¹Corridor 8, 9, and 10 were split into multiple parts for analysis based on corridor goals.

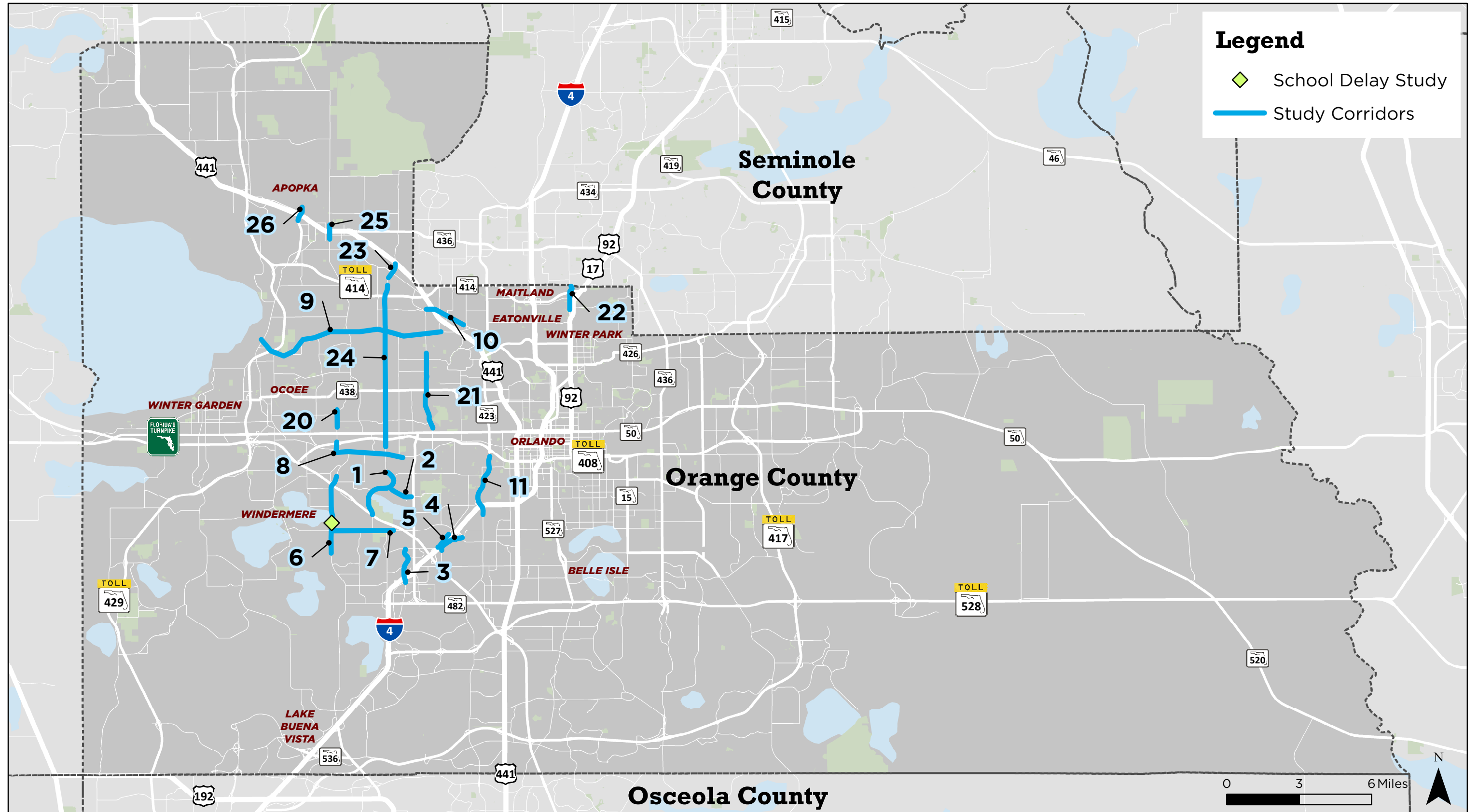
²Retimed only for the weekend.

³Retimed for the weekday and weekend.



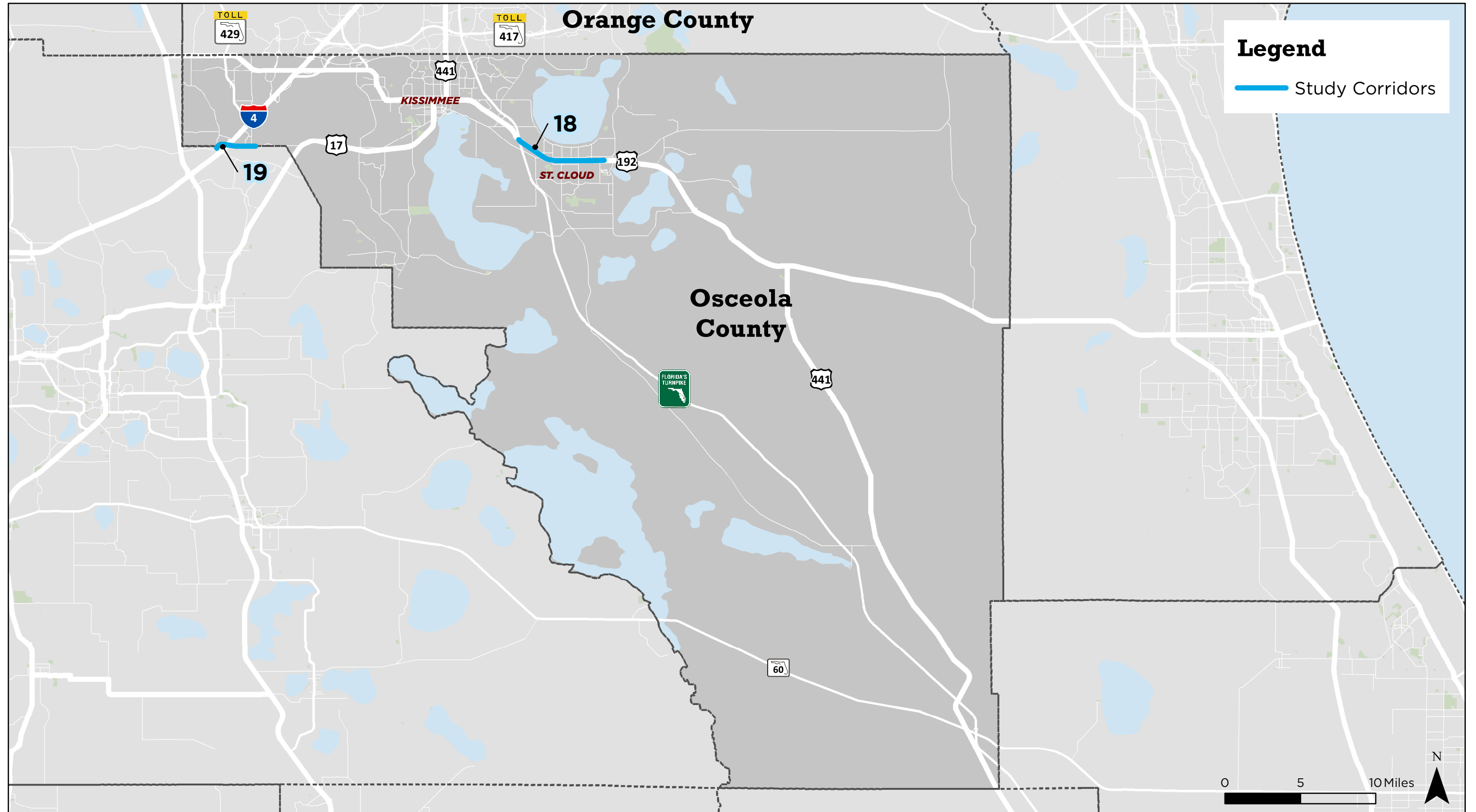
Seminole County Study Corridors

Figure
1



Orange County Study Corridors

Figure
2



Osceola County Study Corridors

Figure
3

Connected Vehicle (CV) Data

Connected Vehicle (CV) data was obtained from Wejo, an England-based aggregator and CV data provider, for use in calculating performance metrics on retimed corridors and intersections. Wejo’s data is sourced from General Motors (GM) vehicles with model years 2015 and more recent. Data regarding a CV’s location, speed, and direction of travel are automatically reported by the CV every three (3) seconds. The temporal and spatial resolution of the CV data is comparable to that obtained from GPS-equipped floating car runs. The methodology used to process and analyze CV data is attached in **Appendix A**.

CV Equity Considerations

An equity analysis was completed to determine the distribution of trips captured with the Wejo data within the MetroPlan Orlando planning area. This analysis looked at the penetration rate (by census tracts) in Osceola, Orange, and Seminole counties. The calculation of the penetration rate relies on assumed home locations for each CV (aka device). The device home location was identified as the census tract where a device started trips most frequently. The number of devices that started trips most frequently in each tract was compared to population counts from the American Community Survey (ACS) 2015-2019. Device share by minority population, Hispanic origin, and people living in poverty were also examined.

Wejo data underrepresents tracts typically associated with Environmental Justice focus areas. Due to equity limitations, CV data should not be used as-is for metrics related to origin-destination (O-D) trip patterns; therefore, O-D metrics were not considered in this analysis. However, corridor-focused measures like travel times, speeds, or delay are less susceptible to bias and were calculated using CV data. **Table 3** lists the device penetration rate for each Environmental Justice category. **Figure 4** shows the device penetration rates by census tract.

Table 3: Device Penetration Rate by Environmental Justice Category

Environmental Justice Category	Device Penetration Rate
Average Tract Penetration Rate	1.62%
Average Penetration Rate for Environmental Justice Focus Areas	1.20%
Average Penetration for Tracts with more than 15% Minority Population	1.55%
Average Penetration for Tracts with more than 15.5% Poverty Population	1.31%
Average Penetration for Tracts with more than 15% Hispanic Population	1.62%

Performance Measures

The project team developed several performance measures to evaluate the retiming program. Historically, evaluation has focused on corridor travel time, however with the use of connected vehicle (CV) data, additional performance measures are available for consideration. For this 2020/2021 retiming cycle, end-to-end corridor travel time is still the only benefit included in the benefit cost analysis; however all metrics are presented for consideration. The performance measures calculated for the 2020/2021 corridors are summarized in **Table 4**. A full methodology for calculating these performance measures is attached in **Appendix A** or is described in the following sections. The dates of data used for each corridor along with implementation dates are summarized in **Table 5**. Holidays were excluded from analysis.

Table 4: Performance Measures

Performance Measure	Description	Intersection	Segment	Full Corridor
Corridor Travel Time	The average time it takes motorists to traverse the corridor			✓
Corridor Travel Time Reliability	A measure of how reliable a travel time is			✓
Fuel Consumption & Emissions	How much full consumption & emissions travel time takes along a corridor			✓
Intersection Delay	The average time it takes motorists to clear a signalized intersection approach	✓		
Signal Progression	Proportion of motorists able to “hit” green signals as they travel through the corridor	✓		✓
Stops/Slow Downs	Average number of stops/slow downs by motorists traveling through the full corridor or segments		✓	✓
Travelled Speed	Proportion of motorists traveling at different speeds			✓
Pedestrian Delay	The average delay a pedestrian experiences crossing an intersection	✓		

Table 5: 2020/2021 Data Collection Dates

Corridor No.	Road	Weekday/Weekend	Before Data Dates	Implementation date ¹	After Data Dates
1	Hiawassee Road	WD	11/1/2020 to 1/24/2021	1/25/2021	4/1/2021 to 5/23/2021
2	Metrowest Boulevard	WD	11/1/2020 to 1/24/2021	1/25/2021	4/1/2021 to 5/23/2021
3	Universal Boulevard	WD	11/1/2020 to 1/31/2021	2/22/2021	4/1/2021 to 5/23/2021
4	Millenia Blvd	WD	11/1/2020 to 1/10/2021	1/11/2021	4/1/2021 to 5/23/2021
5	Vineland Road	WD	11/1/2020 to 1/10/2021	1/11/2021	4/1/2021 to 5/23/2021
6	Apopka Vineland Road	WD	11/1/2020 to 1/31/2021	3/1/2021	4/1/2021 to 5/23/2021
7	Conroy Windermere Road	WD	11/1/2020 to 1/31/2021	3/8/2021	4/1/2021 to 5/23/2021
8 ²	Good Homes Road/Old Winter Garden Road	WD	11/1/2020 to 1/31/2021	3/29/2021	4/1/2021 to 5/23/2021
8A	SR 408 WB Ramps to Powers Drive	-	11/1/2020 to 1/31/2021	3/29/2021	4/1/2021 to 5/23/2021
8B	Pine Hills Road to Ferguson Drive	-	11/1/2020 to 1/31/2021	3/29/2021	4/1/2021 to 5/23/2021
9 ²	West Road/Clarcona Ocoee Road	WD	11/1/2020 to 1/31/2021	3/22/2021	4/1/2021 to 5/23/2021
9A	Ocoee Apopka Road to Apopka-Vineland Road	-	11/1/2020 to 1/31/2021	3/22/2021	4/1/2021 to 5/23/2021
9B	Apopka-Vineland Road to Rose Avenue	-	11/1/2020 to 1/31/2021	3/22/2021	4/1/2021 to 5/23/2021
10 ²	Beggs Road/Edgewater Drive	WD	11/1/2020 to 1/24/2021	1/25/2021	4/1/2021 to 5/23/2021
10A	Overland Road to Mott Avenue	-	11/1/2020 to 1/24/2021	1/25/2021	4/1/2021 to 5/23/2021
10B	Mott Avenue to All American Boulevard	-	11/1/2020 to 1/24/2021	1/25/2021	4/1/2021 to 5/23/2021
11	John Young Parkway	WD	11/1/2020 to 5/9/2021	5/10/2021	5/17/2021 to 5/31/2021
12 ³	SR 426	WE	11/1/2020 to 1/31/2021	2/8/2021	4/1/2021 to 5/23/2021
13 ³	SR 434	WE	11/1/2020 to 5/16/2021	5/17/2021	5/24/2021 to 5/31/2021
14 ³	US17/92	WE	11/1/2020 to 4/19/2021	4/19/2021	4/26/2021 to 5/23/2021
15 ³	SR 436	WE	11/1/2020 to 1/31/2021	3/8/2021	4/1/2021 to 5/23/2021
16 ³	SR 434	WE	11/1/2020 to 1/31/2021	3/8/2021	4/1/2021 to 5/23/2021
17 ⁴	Sand Lake Road	WD	11/1/2020 to 1/31/2021	3/8/2021	4/1/2021 to 5/23/2021
		WE	11/1/2020 to 1/31/2021	3/8/2021	4/1/2021 to 5/23/2021
18	US 192	WD	11/1/2020 to 1/31/2021	2/15/2021	4/1/2021 to 5/23/2021
19	CR 532	WD	11/1/2020 to 1/31/2021	4/5/2021	4/12/2021 to 5/23/2021
20	Good Homes Road	WD	11/1/2020 to 1/17/2021	1/18/2021	4/1/2021 to 5/23/2021
21	Pine Hills Road	WD	11/1/2020 to 1/31/2021	2/15/2021	4/1/2021 to 5/23/2021
22	Maitland Avenue	WD	11/1/2020 to 5/16/2021	5/17/2021	5/24/2021 to 5/31/2021
23	Hiawassee Road (Apopka)	WD	11/1/2020 to 5/2/2021	5/3/2021	5/10/2021 to 5/23/2021
24	Hiawassee Road (Orange)	WD	11/1/2020 to 1/31/2021	2/22/2021	4/1/2021 to 5/23/2021
25	Park Avenue	WD	11/1/2020 to 4/11/2021	4/12/2021	4/19/2021 to 5/23/2021
26	Vick Road	WD	11/1/2020 to 4/11/2021	4/12/2021	4/19/2021 to 5/23/2021

¹Only the first date of the week is reported

²Corridor was split into multiple parts for analysis based on corridor goals.

³Retimed only for the weekend.

⁴Retimed for the weekday and weekend.

Corridor Travel Time

Corridor travel time was used to measure the effectiveness of the signal retiming for most of the FY 20-21 retimed corridors. Weekday data was collected during the AM (7 to 9 AM) and PM (4 to 6 PM) peak periods. Weekend data was collected during the midday peak period from 2 to 3 PM on Saturday and 4 to 5 PM on Sunday. The peak periods were defined in alignment with the signal retiming plans and the traffic counts collected before signal retiming.

The AM and PM peak period corridor travel times and the change in average travel times associated with the retiming projects are summarized by direction in **Table 6**. Data collected on Saturday and Sunday are presented in the AM and PM columns, respectively. As shown in **Table 6**, average travel times *decreased* after the signals were retimed on most corridors.

The change in average travel times/intersection delays (seconds per vehicle) was converted to a total travel time savings (vehicle-hours) by accounting for the peak hour traffic volumes on the corridors. Segment volume counts or turning movement counts provided by the signal retiming consultants were used to determine the directional peak-hour volumes, as available. This data was collected prior to the signal retiming (i.e., in the “before” condition). Along corridors where counts were taken in multiple locations, the average peak hour volumes were calculated for use in this analysis. The existing traffic volumes are provided in **Appendix B**. The peak hour traffic volumes and the total travel time savings are summarized in **Table 7**.

Where corridors were divided into separate segments, due to a goal other than improving end-to-end travel time along the corridor, the travel time savings for each segment are included in **Table 7**. For these corridors, the segment travel time savings were summed to calculate the total corridor travel time savings for use in the benefit/cost analysis.

The weekday corridor retiming projects provided a total travel time benefit (that is reduced travel time along) on 13 of 21 corridors (62%) in the AM Peak Period and 15 of 21 corridors (71%) in the PM Peak Period. The weekend corridor retiming projects provided a total travel time benefit over Saturday and Sunday on 5 of 6 corridors (83%).

On average, the corridor retiming projects provided a 4% reduction in total travel time on the study corridors.

Table 6: 2020/2021 Corridor Average Travel Times – Before and After Conditions

Corridor No.	Road	AM Peak Period Average Travel Times (sec/veh)						PM Peak Period Average Travel Times (sec/veh)					
		Northbound/Eastbound			Southbound/Westbound			Northbound/Eastbound			Southbound/Westbound		
		Before (b)	After (a)	Reduction (t = b - a)	Before (b)	After (a)	Reduction (t = b - a)	Before (b)	After (a)	Reduction (t = b - a)	Before (b)	After (a)	Reduction (t = b - a)
1	Hiawassee Road	228	242	(14)	261	246	15	285	289	(4)	249	246	3
2	Metrowest Boulevard	92	90	2	107	84	23	117	93	24	96	96	0
3	Universal Boulevard	186	230	(44)	186	200	(14)	150	144	6	165	153	12
4	Millenia Blvd	120	99	21	140	111	29	120	114	6	178	129	49
5	Vineland Road	51	36	15	51	39	12	66	66	0	57	54	3
6	Apopka Vineland Road	300	303	(3)	327	327	0	351	306	45	312	321	(9)
7	Conroy Windermere Road	168	183	(15)	270	225	45	276	201	75	330	278	52
8 ¹	Good Homes Road/Old Winter Garden	723	686	38	542	555	(14)	666	624	42	629	603	26
8A	SR 408 WB Ramps to Kirkman Road	492	455	38	327	345	(18)	411	399	12	389	387	2
8B	Kirkman Road to Ferguson Drive	231	231	0	215	210	5	255	225	30	240	216	24
9 ¹	West Road/Clarcona Ocoee Road	678	678	0	651	633	18	666	629	38	672	591	81
9A	SR 408 WB Ramps to Kirkman Road	417	396	21	411	384	27	420	407	14	381	318	63
9B	Kirkman Road to Ferguson Drive	261	282	(21)	240	249	(9)	246	222	24	291	273	18
10 ¹	Beggs Road/Edgewater Drive	276	261	15	276	243	33	272	300	(29)	279	273	6
10A	Overland Road to Mott Avenue	165	153	12	177	171	6	176	171	5	156	177	(21)
10B	Mott Avenue to All American Boulevard	111	108	3	99	72	27	96	129	(33)	123	96	27
11	John Young Parkway	318	255	63	324	189	135	298	279	19	387	314	74
12 ²	SR 426	306	303	3	272	270	2	294	264	30	255	261	(6)
13 ²	SR 434	522	518	5	507	468	39	471	480	(9)	481	474	7
14 ²	US17/92	120	119	2	114	81	33	108	141	(33)	84	104	(20)
15 ²	SR 436	378	348	30	399	396	3	351	324	27	354	339	15
16 ²	SR 434	371	393	(23)	462	447	15	405	381	24	431	417	14
17 ³	Sand Lake Road (Weekday)	156	162	(6)	126	128	(2)	141	135	6	120	114	6
	Sand Lake Road (Weekend)	126	126	0	116	108	8	116	119	(3)	115	104	11
18	US 192	603	492	111	576	537	39	642	614	28	669	573	96
19	CR 532	354	414	(60)	375	363	12	587	381	205	522	414	108
20	Good Homes Road	54	60	(6)	48	51	(3)	63	60	3	60	63	(3)
21	Pine Hills Road	419	393	26	405	384	21	588	462	126	471	420	51
22	Maitland Avenue	176	152	24	222	187	35	246	255	(9)	207	162	45
23	Hiawassee Road (Apopka)	51	63	(12)	60	33	27	84	75	9	84	122	(38)
24	Hiawassee Road (Orange)	738	816	(78)	725	746	(22)	966	906	60	775	816	(42)
25	Park Avenue	102	126	(24)	99	132	(33)	102	101	2	105	132	(27)
26	Vick Road	92	102	(11)	93	99	(6)	81	99	(18)	105	102	3

¹Corridor was split into multiple parts for analysis based on corridor goals. ²Retimed only for the weekend. ³Retimed for the weekday and weekend.

*Data collected on Saturday and Sunday are presented in the AM and PM columns, respectively

Table 7: Total Travel Time Savings

Corridor No.	Road	AM Peak Period						PM Peak Period						Total AM and PM Peak Period Travel Time Reduction	
		Northbound/Eastbound			Southbound/Westbound			Northbound/Eastbound			Southbound/Westbound				
		Peak Hour Volume (veh-hr)	Δ Travel Time (sec)	Total Savings (veh-hr)	Peak Hour Volume (veh-hr)	Δ Travel Time (sec)	Total Savings (veh-hr)	Peak Hour Volume (veh-hr)	Δ Travel Time (sec)	Total Savings (veh-hr)	Peak Hour Volume (veh-hr)	Δ Travel Time (sec)	Total Savings (veh-hr)	Vehicle Hours	Percentage of Travel Time
1	Hiawassee Road	760	(14)	(3)	983	15	4	1253	(4)	(1)	1048	3	1	1	0.3%
2	Metrowest Boulevard	542	2	0	544	23	3	654	24	4	783	0	0	8	11.1%
3	Universal Boulevard	355	(44)	(4)	300	(14)	(1)	357	6	1	479	12	2	(3)	-4.6%
4	Millenia Blvd	340	21	2	322	29	3	655	6	1	654	49	9	15	18.6%
5	Vineland Road	603	15	3	530	12	2	750	0	0	621	3	1	5	12.1%
6	Apopka Vineland Road	958	(3)	(1)	1051	0	0	1254	45	16	1119	(9)	(3)	12	3.1%
7	Conroy Windermere Road	1081	(15)	(5)	1239	45	15	1050	75	22	1431	52	21	54	15.1%
8 ¹	Good Homes Road/Old Winter Garden	824	38	9	757	(14)	(3)	1617	42	19	1089	26	8	32	4.2%
8A	SR 408 WB Ramps to Kirkman Road	781	38	8	840	(18)	(4)	2474	12	8	963	2	0	13	2.2%
8B	Kirkman Road to Ferguson Drive	867	0	0	673	5	1	760	30	6	1215	24	8	15	6.6%
9 ¹	West Road/Clarcona Ocoee Road	756	0	0	686	18	3	794	38	8	817	81	18	30	5.3%
9A	SR 408 WB Ramps to Kirkman Road	605	21	4	562	27	4	645	14	2	617	63	11	21	7.6%
9B	Kirkman Road to Ferguson Drive	907	(21)	(5)	810	(9)	(2)	944	24	6	1018	18	5	4	1.5%
10 ¹	Beggs Road/Edgewater Drive	723	15	3	345	33	3	410	(29)	(3)	828	6	1	4	2.4%
10A	Overland Road to Mott Avenue	414	12	1	184	6	0	186	5	0	492	(21)	(3)	(1)	-1.6%
10B	Mott Avenue to All American Boulevard	1031	3	1	506	27	4	634	(33)	(6)	1164	27	9	8	7.4%
11	John Young Parkway	1460	63	26	1208	135	45	1964	19	10	1454	74	30	111	19.9%
12 ²	SR 426	908	3	1	1164	2	0	1566	30	13	1151	(6)	(2)	12	3.3%
13 ²	SR 434	1190	5	1	1015	39	11	1435	(9)	(4)	1447	7	3	12	1.7%
14 ²	US17/92	1347	2	1	479	33	4	754	(33)	(7)	1534	(20)	(8)	(10)	-8.7%
15 ²	SR 436	1381	30	12	992	3	1	1678	27	13	1845	15	8	33	5.4%
16 ²	SR 434	758	(23)	(5)	753	15	3	1393	24	9	1114	14	4	12	2.6%
17 ³	Sand Lake Road (Weekday)	586	(6)	(1)	369	(2)	(0)	570	6	1	829	6	1	1	1.4%
	Sand Lake Road (Weekend)	586	0	0	369	8	1	570	(3)	(0)	829	11	3	3	3.8%
18	US 192	705	111	22	876	39	9	1318	28	10	716	96	19	61	9.7%
19	CR 532	772	(60)	(13)	701	12	2	912	205	52	915	108	27	69	16.0%
20	Good Homes Road	317	(6)	(1)	511	(3)	(0)	705	3	1	498	(3)	(0)	(1)	-2.4%
21	Pine Hills Road	726	26	5	920	21	5	1265	126	44	1087	51	15	70	13.1%
22	Maitland Avenue	736	24	5	848	35	8	882	(9)	(2)	754	45	9	20	10.6%
23	Hiawassee Road (Apopka)	627	(12)	(2)	676	27	5	966	9	2	1035	(38)	(11)	(5)	-8.0%
24	Hiawassee Road (Orange)	673	(78)	(15)	850	(22)	(5)	1060	60	18	934	(42)	(11)	(13)	-1.6%
25	Park Avenue	458	(24)	(3)	427	(33)	(4)	758	2	0	432	(27)	(3)	(10)	-16.8%
26	Vick Road	331	(11)	(1)	584	(6)	(1)	788	(18)	(4)	440	3	0	(6)	-10.2%

¹Corridor was split into multiple parts for analysis based on corridor goals. ²Retimed only for the weekend. ³Retimed for the weekday and weekend.

*Notation and Calculations: Peak Hour Volume (v); Change in Travel Time (t); Total Reduction (S = (v*t) / 3600); Total AM and PM Peak Hour Travel Time Reduction: absolute vehicle hours (ST=S1+S2+S3+S4) and percentage of beginning travel time (PT = ST / Σ(bi * vi))

*Data collected on Saturday and Sunday are presented in the AM and PM columns, respectively

Level of Travel Time Reliability

The segment-level travel time reliability was computed in accordance with the guidance in the MAP-21 Level of Travel Time Reliability (LOTTR) metric for each corridor evaluated for corridor travel time. This methodology is in alignment with the MetroPlan Orlando Segment-Level Performance Measures analysis previously completed in 2020. The reliability index is calculated as:

$$\text{Reliability Index} = \frac{\text{80th Percentile Travel Time}}{\text{50th Percentile Travel Time}}$$

The following time periods are used to compute the LOTTR:

- Weekday AM Peak (6-10 AM)
- Weekday PM Peak (4-8 PM)
- Weekday Midday (10 AM-4 PM)
- Weekends (6 AM-8 PM)

The LOTTR metric considers a segment reliable if the reliability index is less than 1.5 for all four time periods listed above. For the purposes of this analysis, the maximum (i.e., worst) reliability index across the time periods of interest and two directions of travel is reported for each segment in **Table 8**. For example, if a corridor was only retimed for the weekend, the time period of interest would only include the weekend time period and only the weekend time period would be used to calculate the LOTTR.

20 of 27 corridors (74%) now have reliable travel times during the periods of interest as compared to the 19 of 27 corridors (70%) that had reliable travel times before and after the signal retiming.

Table 8: Reliability Summary

Corridor No.	Road	LOTTR			
		Maximum Before LOTTR	Maximum After LOTTR	Before Reliable?	After Reliable?
1	Hiwassee Road	1.21	1.31	Reliable	Reliable
2	Metrowest Boulevard	1.34	1.46	Reliable	Reliable
3	Universal Boulevard	1.30	1.41	Reliable	Reliable
4	Millenia Blvd	1.43	1.49	Reliable	Reliable
5	Vineland Road	1.65	2.00	Unreliable	Unreliable
6	Apopka Vineland Road	1.15	1.16	Reliable	Reliable
7	Conroy Windermere Road	1.48	1.51	Reliable	Unreliable
8 ¹	Good Homes Road/Old Winter Garden Road	1.16	1.24	Reliable	Reliable
8A	SR 408 WB Ramps to Kirkman Road	1.15	1.30	Reliable	Reliable
8B	Kirkman Road to Ferguson Drive	1.16	1.17	Reliable	Reliable
9 ¹	West Road/Clarcona Ocoee Road	1.27	1.25	Reliable	Reliable
9A	SR 408 WB Ramps to Kirkman Road	1.22	1.22	Reliable	Reliable
9B	Kirkman Road to Ferguson Drive	1.33	1.28	Reliable	Reliable
10 ¹	Beggs Road/Edgewater Drive	1.51	1.55	Unreliable	Unreliable
10A	Overland Road to Mott Avenue	1.46	1.25	Reliable	Reliable
10B	Mott Avenue to All American Boulevard	1.56	1.84	Unreliable	Unreliable
11	John Young Parkway	1.21	1.30	Reliable	Reliable
12 ²	SR 426	1.14	1.20	Reliable	Reliable
13 ²	SR 434	1.12	1.16	Reliable	Reliable
14 ²	US17/92	1.59	1.41	Unreliable	Reliable
15 ²	SR 436	1.23	1.22	Reliable	Reliable
16 ²	SR 434	1.21	1.34	Reliable	Reliable
17 ³	Sand Lake Road (Weekday)	1.31	1.27	Reliable	Reliable
	Sand Lake Road (Weekend)	1.17	1.21	Reliable	Reliable
18	US 192	1.19	1.17	Reliable	Reliable
19	CR 532	1.48	1.61	Reliable	Unreliable
20	Good Homes Road	1.39	1.40	Reliable	Reliable
21	Pine Hills Road	1.21	1.18	Reliable	Reliable
22	Maitland Avenue	1.33	1.43	Reliable	Reliable
23	Hiwassee Road (Apopka)	1.88	1.81	Unreliable	Unreliable
24	Hiwassee Road (Orange)	1.11	1.14	Reliable	Reliable
25	Park Avenue	1.40	1.55	Reliable	Unreliable
26	Vick Road	1.59	1.52	Unreliable	Unreliable

¹Corridor was split into multiple parts for analysis based on corridor goals. ²Retimed only for the weekend. ³Retimed for the weekday and weekend.

Fuel Consumption and Emissions

Reductions in fuel consumption and vehicle emissions are directly related to corridor travel time savings. These reductions are determined using the relationships shown in **Table 9**. Considering only the metrics for peak period corridor travel time, the 2020/2021 retiming program is estimated to reduce fuel consumption by approximately 121,554 gallons per year and reduce carbon dioxide emissions by 1,179 tons per year. These reductions correspond to a combined savings of approximately \$287,281 per year.

Table 9: Fuel Consumption and Emissions Values

Measure	Unit Value	Source
Fuel Consumption	0.87 gallons/hour of delay	FHWA (2010). <i>Quantifying Benefits of Traffic Signal Retiming</i>
Cost of Fuel (FL – 2020 Avg.)	\$2.15 / gallon	U.S. Energy Information Administration
Emissions	19.4 lbs of CO ₂ / gallon	FHWA (2010). <i>Quantifying Benefits of Traffic Signal Retiming</i>
Cost of Emissions	\$22 / ton of CO ₂	FHWA (2010). <i>Quantifying Benefits of Traffic Signal Retiming</i>

Intersection Delay

The total intersection delay was calculated for school intersections at the five (5) schools listed in **Table 10** during school drop-off/pick-up times using field-collected queue observations and for all intersections during the peak-hour using CV data. Field-collected queue studies were used to calculate intersection delay for the school drop-off/pick-up times to ensure that before/after data would be available for these intersections while the CV-based methodology for intersection delay was being developed.

School Intersection Delay (Queue Study)

Intersection control delay for motorists was calculated for applicable intersections according to the procedure outlined in the FDOT MUTS Chapter 7.4. Intersection control delay data was collected for the morning peak period from 7:00 to 9:00 AM and the afternoon peak period from 4:00 to 6:00 PM on Tuesdays, Wednesdays or Thursdays for each roadway included in the queue study. Intersection control delay was calculated for the peak hour within the defined two hour interval for each intersection.

The FDOT MUTS Chapter 7.4 methodology for calculating intersection delay involves a procedure of counting the number of vehicles that are queued at the intersection on each leg at consistent intervals. Additionally, the number of vehicles arriving at the intersection on each

leg is recorded. These two counts allow queueing formulas to be used to estimate the average time in queue vehicles approaching the intersection experience on each leg. An additional factor is added to the time in queue to account for acceleration and deceleration delays, resulting from queueing. The delay on each approach is weighted by the number of vehicles recorded on the approach to calculate the overall average intersection delay. The results are shown by corridor and intersection in **Table 10**. A summary of the Intersection Delay Studies for each intersection is included in **Appendix C**.

Following the retiming efforts, intersection delay was reduced at 1 of 5 intersections (20%) during the AM peak period and at 2 of 5 intersections (40%) during the PM peak period. Of the three intersections that experienced an increase in delay, none increased by more than 30 seconds.

Peak-Period Intersection Delay (CV Data)

Peak-period intersection delay was calculated using CV data for all intersections along the retimed corridors. Total driver intersection delay was calculated by weighting the average driver delay for each approach or movement by the count of vehicles. The results are shown in **Table 11**.

Following the retiming efforts, total intersection delay for drivers was reduced at 91 of 188 intersections (48%) during the AM peak period and at 96 of 188 intersections (51%) during the PM peak period.

Table 10: School Intersection Delay

Corridor No.	School	Intersection	Before Collection Date	Implementation Date	After Collection Date	AM Peak Period Intersection Delay (sec/veh)			PM Peak Period Intersection Delay (sec/veh)		
						Before	After	Reduction	Before	After	Reduction
						(b)	(a)	(t = b - a)	(b)	(a)	(t = b - a)
6	Olympia High School	Apopka Vineland Rd & School Entrance	2/24/2021	3/1/2021	3/31/2021	24	34	(10)	16	9	7
12	Trinity Preparatory School	SR 426 & Trinity Prep Ln	2/4/2021	2/8/2021	3/31/2021	9	27	(17)	11	15	(5)
15	Forrest Lake Elementary School	SR 436 & Post Lake Pl/Education Loop	2/16/2021	3/8/2021	4/14/2021	7	8	(1)	11	12	(1)
17	Forrest City Elementary School	Sand Lake Rd & School Entrance	2/16/2021	3/8/2021	4/28/2021	17	22	(6)	36	39	(3)
17	Lake Brantley High School	Sand Lake Rd & School Entrance	2/16/2021	3/8/2021	4/28/2021	24	16	9	33	27	6

Table 11: Peak-Period Intersection Delay

Int ID	Intersection Name	Average Intersection Delay (sec/veh)					
		AM (7-9 AM)			PM (4-6 PM)		
		Before	After	Δ	Before	After	Δ
1_1	Hiawasse Rd & Mardell Ct	3.1	3.3	(0.2)	3.9	3.4	0.5
1_2	Hiawasse Rd & Hunterdon Dr	3.0	3.0	0.0	3.1	3.1	(0.0)
1_3	Hiawasse Rd & Westpointe Blvd	22.8	25.6	(2.8)	38.4	33.8	4.6
1_4	Hiawasse Rd & Turkey Lake Rd	2.0	3.4	(1.5)	6.0	6.4	(0.5)
1_5	Hiawasse Rd & Metrowest Blvd	11.3	13.3	(2.0)	22.0	25.5	(3.5)
1_6	Hiawasse Rd & Seminole Rd	1.9	1.9	0.0	2.2	2.6	(0.4)
1_7	Hiawasse Rd & Raleigh St	16.8	20.1	(3.4)	31.4	32.1	(0.7)
2_1	Metrowest Blvd & Metrocenter Blvd	28.7	17.1	11.6	14.1	19.0	(4.9)
2_2	Metrowest Blvd & Wilshire Dr	3.6	3.3	0.3	13.2	8.2	5.0
3_1	Universal Blvd & I 4 EB Off Ramp	33.0	30.1	2.9	22.0	24.1	(2.1)
3_2	Universal Blvd & I 4 WB Off Ramp	0.1	3.0	(2.9)	1.1	1.7	(0.6)
3_3	Universal Blvd & Parking Exit	5.8	11.7	(5.9)	8.0	7.4	0.6
3_4	Universal Blvd & Hollywood Way	19.6	20.2	(0.6)	44.7	41.5	3.1
3_5	Universal Blvd & Universal Parking	4.8	5.8	(1.0)	3.0	5.4	(2.4)
3_6	Universal Blvd & Major Blvd	5.4	8.0	(2.6)	6.6	7.6	(1.0)
3_7	Universal Blvd & Loews Portofino Bay Hotel	7.4	12.1	(4.7)	11.5	12.8	(1.3)
4_1	Millenia Blvd & Radebaugh Way	19.5	14.4	5.0	37.9	21.9	16.0
4_2	Millenia Blvd & Millenia Lakes Blvd	1.7	2.0	(0.3)	3.4	3.4	0.1
4_3	Millenia Blvd & Topiary Dr	3.0	3.3	(0.3)	5.1	4.6	0.5
4_4	Millenia Blvd & Conservatory Ln	11.8	8.6	3.2	32.6	32.1	0.4
5_1	Vineland Rd & Radebaugh Way	9.5	10.2	(0.7)	20.5	28.0	(7.6)
5_2	Vineland Rd & Walden Cr	4.4	3.6	0.8	3.4	3.2	0.2
6_1	Apopka Vineland Rd & Bay Side Dr	4.2	5.5	(1.3)	4.4	3.9	0.5
6_2	Apopka Vineland Rd & Woodbreeze Blvd	4.8	4.7	0.1	3.3	6.6	(3.3)
6_3	Apopka Vineland Rd & Horizon Cr	2.6	2.5	0.1	2.5	4.0	(1.5)
6_4	Apopka Vineland Rd & CR 439	44.7	34.1	10.6	48.9	31.1	17.9
6_5	Apopka Vineland Rd & Olympia HS	5.4	5.6	(0.2)	4.2	4.3	(0.1)
6_7	Apopka Vineland Rd & Westover Roberts Rd	4.6	2.5	2.1	7.9	3.6	4.3
6_8	Apopka Vineland Rd & Steer Lake Rd	12.5	9.5	3.0	20.0	29.1	(9.1)
7_1	Conroy Windermere Rd & Shopping Center	3.2	5.0	(1.8)	24.5	15.4	9.0
7_2	Conroy Windermere Rd & Lincoln Ave	5.1	9.3	(4.2)	6.2	9.1	(2.9)
7_3	Conroy Windermere Rd & Dr. Phillips Blvd	18.1	15.8	2.3	25.0	23.2	1.8
7_4	Conroy Windermere Rd & CR 439	14.2	12.6	1.6	23.1	17.6	5.5
7_5	Conroy Windermere Rd & Conroy Club Dr	9.4	6.1	3.3	46.7	22.9	23.8
8A_1	Good Homes Rd & SR 408 WB Off Ramp	6.3	6.5	(0.2)	11.6	12.4	(0.9)
8A_2	Good Homes Rd & SR 408 EB Ramp	5.6	4.8	0.8	11.3	17.0	(5.6)
8A_3	Old Winter Garden Rd & Good Homes Rd	25.5	57.4	(31.9)	52.5	50.2	2.3
8A_4	Good Homes Rd & Apopka Vineland Rd	14.6	13.9	0.7	28.0	21.2	6.7
8A_5	Good Homes Rd & Killington Way	3.4	2.0	1.3	0.3	0.3	(0.0)
8A_6	Good Homes Rd & Steer Lake Rd	3.6	3.3	0.2	3.6	3.6	(0.0)
8A_7	Good Homes Rd & Dorscher Rd	3.7	4.0	(0.4)	5.2	5.4	(0.2)
8A_8	Good Homes Rd & Hiawasse Rd	40.7	44.2	(3.5)	53.3	88.2	(34.8)
8A_9	Good Homes Rd & Powers Dr	12.8	30.2	(17.4)	21.3	29.3	(8.1)
8B_1	Good Homes Rd & Nome Dr	12.7	15.5	(2.8)	20.5	25.8	(5.3)
8B_4	Good Homes Rd & SR 408 WB	5.0	3.8	1.2	3.0	3.0	0.0
8B_5	Good Homes Rd & Ferguson Dr	10.9	10.6	0.3	22.2	24.8	(2.6)
9A_1	Clarcona Ocoee Rd & SR 437	28.4	36.1	(7.7)	38.9	40.9	(2.0)
9A_2	Clarcona Ocoee Rd & SR 429 SB On Ramp	7.1	5.9	1.2	5.4	4.1	1.4
9A_3	Clarcona Ocoee Rd & SR 429 NB Off Ramp	3.1	3.1	0.0	10.3	3.2	7.1
9A_4	Clarcona Ocoee Rd & Lakewood Ave	3.8	4.0	(0.2)	4.4	1.1	3.2
9A_5	Clarcona Ocoee Rd & Adair St	3.0	4.5	(1.5)	3.9	2.8	1.1
9A_6	Clarcona Ocoee Rd & Clark Rd	13.0	8.1	4.9	13.4	18.8	(5.3)
9B_1	Clarcona Ocoee Rd & Beggs Rd	1.6	1.8	(0.2)	3.4	3.7	(0.3)
9B_2	Clarcona Ocoee Rd & Hiawasse Rd	29.6	36.0	(6.4)	41.3	40.0	1.3
9B_3	Clarcona Ocoee Rd & Powers Dr	2.8	2.6	0.1	4.4	5.2	(0.8)
9B_4	Clarcona Ocoee Rd & Lake Sparling Rd	4.2	7.8	(3.6)	3.5	3.4	0.2
9B_5	Clarcona Ocoee Rd & Pine Hills Rd	20.4	18.8	1.6	45.2	40.6	4.6
9B_6	Clarcona Ocoee Rd & Rose Ave	6.8	6.8	(0.0)	8.8	9.1	(0.4)
10A_1	Beggs Rd & Overland Rd	5.6	10.2	(4.7)	6.4	9.3	(3.0)
10A_2	Beggs Rd & Pine Hills Rd	22.7	25.0	(2.3)	22.2	27.5	(5.3)
10A_3	Beggs Rd & Rose Ave	10.2	18.5	(8.4)	8.7	14.6	(5.9)
10A_4	Beggs Rd & Mott Rd	14.6	21.6	(7.0)	11.9	8.3	3.6
10B_1	Beggs Rd & Magnolia Holmes Rd	7.9	2.0	5.9	18.9	11.3	7.6
10B_2	Beggs Rd & Clarcona Ocoee Rd	18.5	16.5	2.0	15.4	26.2	(10.8)
10B_3	Beggs Rd & All American Blvd	20.9	15.3	5.6	22.6	13.4	9.2
11_1	John Young Parkway & 35th St	16.5	25.9	(9.4)	28.4	28.9	(0.5)
11_4	John Young Parkway & L.B. Mc Leod Rd	50.5	30.8	19.7	35.5	23.8	11.7
11_5	John Young Parkway & Clear Way	5.4	3.0	2.4	18.9	11.0	7.9
11_6	John Young Parkway & Ramp To John Young Pkwy	3.5	3.0	0.5	6.8	4.2	2.7
11_7	John Young Parkway & Shopping Center Drway	4.1	3.0	1.1	4.2	3.0	1.2
11_8	John Young Parkway & Raleigh St	46.7	6.7	40.0	25.8	8.6	17.2
11_10	John Young Parkway & Orange Center Blvd	11.5	3.1	8.4	8.0	7.6	0.5
11_11	John Young Parkway & C R Smith St	3.0	0.4	2.6	3.0	3.0	(0.0)

Table 11 Cont.: Peak-Period Intersection Delay

Int ID	Intersection Name	Average Intersection Delay (sec/veh)					
		AM (7-9 AM)			PM (4-6 PM)		
		Before	After	Δ	Before	After	Δ
12_1	SR 426 & Old Howell Branch Rd	2.5	2.3	0.2	2.4	1.9	0.6
12_2	SR 426 & Hall Rd	36.1	37.6	(1.5)	27.6	26.7	0.9
12_3	SR 426 & Trinity Prep Ln	4.4	4.4	(0.0)	3.0	4.4	(1.4)
12_4	SR 426 & S Tuskawilla Rd	21.7	19.0	2.7	19.4	15.0	4.4
12_5	SR 426 & Clayton Crossing Way	17.7	21.7	(4.0)	17.8	16.6	1.2
12_6	SR 426 & SR 417 SB On Ramp	3.0	3.0	0.0	2.5	3.0	(0.5)
12_7	SR 426 & Seminole Expressway NB Ramp	1.6	1.4	0.2	1.4	1.4	(0.0)
12_8	SR 426 & Dean Rd	11.7	11.4	0.3	11.5	10.5	1.0
13_1	SR 434 & Manor Ave	3.0	3.0	0.0	0.0	0.0	0.0
13_3	SR 434 & Springs Blvd	4.4	4.3	0.1	4.4	4.4	0.0
13_4	SR 434 & Spring Centre Blvd	2.0	2.0	0.0	2.0	2.0	0.0
13_5	SR 434 & Douglas Ave	35.0	28.7	6.3	26.2	24.1	2.1
13_6	SR 434 & I-4 Ramps	3.0	3.0	0.0	0.0	3.0	(3.0)
13_7	SR 434 & I-4 Ramps	13.5	14.3	(0.8)	12.5	9.4	3.1
13_8	SR 434 & Raymond Ave	3.0	3.0	0.0	3.0	3.0	0.0
13_9	SR 434 & Roxboro Rd	3.0	3.7	(0.7)	3.0	3.0	0.0
13_10	SR 434 & Tollgate Trl	3.0	3.0	0.0	3.0	3.0	0.0
13_11	SR 434 & Palm Spings Rd	18.8	4.5	14.3	16.3	5.3	11.0
13_12	SR 434 & Range Line Rd	7.4	6.0	1.4	8.7	12.7	(4.0)
13_13	SR 434 & Florida Central Pkwy	7.6	7.4	0.1	6.0	4.5	1.5
13_14	SR 434 & CR 427	35.6	24.5	11.2	26.6	18.4	8.2
13_15	SR 434 & S Grant St	2.4	2.5	(0.2)	2.8	3.8	(1.0)
13_16	SR 434 & S Wayman St	1.0	1.0	0.0	1.0	1.0	0.0
14_1	US 17/92 & Orange Blvd	20.0	11.2	8.8	13.3	14.5	(1.2)
14_2	US 17/92 & Orange Blvd	16.0	17.0	(1.0)	12.6	21.3	(8.7)
14_3	US 17/92 & SR 15 To I 4	7.4	7.1	0.2	5.6	5.5	0.1
15_1	SR 436 & Sand Lake Rd	4.2	3.7	0.4	3.3	4.4	(1.1)
15_2	SR 436 & Balmy Beach Dr	13.2	7.9	5.3	10.4	7.4	2.9
15_3	SR 436 & Hunt Club Blvd	12.8	9.1	3.8	12.1	6.7	5.5
15_4	SR 436 & Bear Lake Rd	9.1	7.9	1.2	5.6	7.1	(1.5)
15_5	SR 436 & Harley Lester Ln	3.0	3.0	0.0	3.0	3.0	0.0
15_6	SR 436 & Campus Loop	3.2	1.9	1.3	2.7	2.7	(0.0)
15_7	SR 436 & Academy Dr	4.3	6.2	(1.9)	3.1	3.7	(0.6)
15_8	SR 436 & McNeil Rd	4.0	4.6	(0.6)	2.8	2.8	0.0
15_9	SR 436 & Maple St	3.9	3.8	0.2	3.0	3.0	0.0
15_10	SR 436 & SR 434	48.6	43.5	5.0	40.2	28.9	11.3
15_11	SR 436 & Laurel St	8.0	10.8	(2.8)	6.2	10.5	(4.3)
16_1	SR 434 & 414 Ramps	2.8	2.3	0.5	1.0	1.3	(0.3)
16_2	SR 434 & 414 Ramps	4.0	4.1	(0.1)	2.4	2.3	0.1
16_4	SR 434 & Lotus Landing Blvd	3.0	3.0	0.0	3.0	3.0	0.0
16_5	SR 434 & Bunnell Rd	16.9	17.7	(0.8)	19.0	17.7	1.3
16_6	SR 434 & Orange Ave	12.8	13.9	(1.1)	14.8	10.0	4.8
16_7	SR 434 & SR436	25.3	30.5	(5.2)	20.4	23.5	(3.1)
16_8	SR 434 & Cape Cod Ln	6.0	6.0	0.0	6.0	6.0	0.0
16_9	SR 434 & Sand Lake Rd	6.4	5.4	1.0	4.6	4.6	(0.1)
16_10	SR 434 & Jamestown Blvd	9.1	6.0	3.1	4.3	4.5	(0.2)
16_11	SR 434 & E Lake Brantley Dr	5.9	6.5	(0.6)	5.0	5.2	(0.2)
17_1WD	Sand Lake Rd & Oak Haven Dr	9.4	6.8	2.6	4.8	4.0	0.8
17_2WD	Sand Lake Rd & Hickory Dr	7.1	7.2	(0.1)	6.2	3.4	2.8
17_3AWD	Sand Lake Rd & Lake Brantley High School Drway	9.5	7.8	1.7	3.9	3.6	0.3
17_4WD	Sand Lake Rd & Lake Brantley High Back Entrance	14.2	8.3	5.9	3.1	3.1	0.0
17_1WE	Sand Lake Rd & Oak Haven Dr	5.4	4.0	1.4	3.0	3.0	0.0
17_2WE	Sand Lake Rd & Lake Brantley High School Drway	5.9	5.8	0.1	4.6	3.0	1.6
17_3AWE	Sand Lake Rd & Lake Brantley High School Drway	4.5	3.9	0.6	2.9	1.2	1.6
17_4WE	Sand Lake Rd & Lake Brantley High Back Entrance	3.0	0.0	3.0	0.0	0.0	0.0
18_1	US 192 & SR 91 NB Off Ramp	8.4	8.4	0.0	62.2	12.2	50.0
18_2	US 192 & Commerce center Dr	16.5	10.1	6.4	24.9	41.2	(16.3)
18_3	US 192 & Old Canoe Creek Rd	16.4	11.9	4.5	26.1	20.2	5.8
18_4	US 192 & Brown Chapel Rd	30.4	18.8	11.6	23.8	24.9	(1.1)
18_5	US 192 & Big Lots	3.5	1.2	2.2	3.9	4.8	(0.9)
18_6	US 192 & Budinger Ave	13.7	9.9	3.8	8.3	19.2	(10.8)
18_7	US 192 & Tennessee Ave	3.0	3.0	0.0	5.5	5.1	0.4
18_8	US 192 & CR 523	20.3	13.5	6.8	24.6	24.2	0.4
18_11	US 192 & Delaware Ave	7.1	8.8	(1.7)	6.0	7.5	(1.5)
18_12	US 192 & CR 534	13.0	13.7	(0.7)	14.4	10.5	3.9
19_1	CR 532 & Masters Blvd	10.9	9.1	1.8	17.5	11.2	6.4
19_2	CR 532 & Calder Blvd	11.6	18.8	(7.2)	26.3	17.6	8.7
19_3	CR 532 & I 4 WB Off Ramp	48.4	46.4	2.0	37.9	23.2	14.6
19_4	CR 532 & CR 532 To I-4	18.5	54.1	(35.6)	22.7	11.6	11.0
19_5	CR 532 & Heritage Pass	6.0	6.0	0.0	6.0	3.1	2.9
19_6	CR 532 & Legacy Village Dr	3.0	3.0	0.0	3.0	3.0	0.0
19_7	CR 532 & Reunion Blvd	3.1	3.2	(0.1)	3.1	3.1	(0.0)
19_8	CR 532 & Old lake Wilson Rd	28.0	25.1	2.8	98.8	90.9	7.9

Table 11 Cont.: Peak-Period Intersection Delay

Int ID	Intersection Name	Average Intersection Delay (sec/veh)					
		AM (7-9 AM)			PM (4-6 PM)		
		Before	After	Δ	Before	After	Δ
20_1	Good Homes Rd & Balboa Dr	7.9	9.4	(1.5)	13.0	12.6	0.4
20_2	Good Homes Rd & E Orolando Ave	8.2	7.8	0.4	10.0	7.7	2.4
21_1	Pine Hills Rd & Balboa Dr	6.7	4.7	2.0	19.5	12.8	6.7
21_2	Pine Hills Rd & Dolores Dr	5.3	6.0	(0.7)	6.7	6.0	0.7
21_3	Pine Hills Rd & Hernandez Dr	4.2	4.5	(0.3)	6.1	6.0	0.1
21_4	Pine Hills Rd & Indialantic Dr	24.9	4.4	20.4	27.7	6.3	21.4
21_5	Pine Hills Rd & SR 438	31.5	46.8	(15.3)	79.1	89.7	(10.6)
21_6	Pine Hills Rd & Belco Dr	7.8	5.4	2.4	14.7	12.9	1.8
21_7	Pine Hills Rd & Londonderry Blvd	4.7	6.1	(1.4)	9.4	3.1	6.3
21_8	Pine Hills Rd & Indian Hills Rd	4.2	3.6	0.6	9.2	8.6	0.6
21_9	Pine Hills Rd & North Lane	17.9	28.4	(10.5)	40.4	42.8	(2.4)
22_1	Maitland Ave & E Horatio Ave	22.4	21.0	1.4	39.6	39.5	0.1
22_2	Maitland Ave & Sandspur Rd	12.2	3.4	8.8	8.7	6.2	2.5
22_3	Maitland Ave & Marion Way	3.5	4.3	(0.8)	6.8	22.0	(15.2)
22_4	Maitland Ave & SR 414	43.7	46.4	(2.7)	60.7	56.4	4.3
23_1	Hiawasse Rd & Edgewater Dr	16.1	17.3	(1.2)	19.1	55.4	(36.3)
23_2	Hiawasse Rd & Walmart	9.3	16.0	(6.7)	20.4	24.7	(4.3)
24_1	Hiawasse Rd & SR 408 EB	5.0	9.2	(4.2)	11.3	6.4	5.0
24_2	Hiawasse Rd & SR 408 WB	7.2	7.3	(0.2)	10.4	15.0	(4.6)
24_3	Hiawasse Rd & W Colonial Dr	28.8	38.6	(9.8)	54.5	33.0	21.5
24_4	Hiawasse Rd & Orange County MultiCultural Center	3.3	3.7	(0.4)	4.5	4.6	(0.1)
24_5	Hiawasse Rd & Vernon St	12.6	17.8	(5.2)	18.8	28.1	(9.3)
24_6	Hiawasse Rd & Hennepin Blvd	9.0	11.3	(2.3)	4.5	4.6	(0.2)
24_7	Hiawasse Rd & SR438	56.6	54.6	2.0	65.7	67.8	(2.2)
24_8	Hiawasse Rd & Super Beauty Depot	3.4	4.6	(1.2)	11.3	9.5	1.7
24_9	Hiawasse Rd & Coral Cove Dr	9.9	7.6	2.3	15.0	10.7	4.3
24_10	Hiawasse Rd & Hiawasse Oak Dr	4.1	5.5	(1.4)	3.7	5.8	(2.1)
24_11	Hiawasse Rd & Clarcona Ocoee Rd	27.7	34.6	(6.9)	42.2	50.9	(8.7)
24_12	Hiawasse Rd & Beggs Rd	8.4	9.1	(0.7)	10.8	17.3	(6.6)
24_13	Hiawasse Rd & SR 414 EB Ramp	11.1	12.7	(1.6)	4.8	4.9	(0.0)
24_14	Hiawasse Rd & SR 414 WB Ramp	5.5	7.0	(1.6)	3.0	3.0	0.0
24_15	Hiawasse Rd & Wekiva High School	9.0	7.7	1.3	3.0	3.0	(0.0)
25_1	Park Ave & E 5th St	8.0	11.3	(3.3)	12.1	14.3	(2.2)
25_2	Park Ave & SR 500	35.2	27.6	7.5	60.1	48.8	11.4
26_1	Vick Rd & SR 500	33.7	27.8	5.9	43.8	38.2	5.6
26_2	Vick Rd & Edgewater Dr	29.1	26.0	3.1	17.1	18.1	(1.0)

*Data collected on Saturday and Sunday are presented in the AM and PM columns, respectively

Signal Progression & Stops and Slow Downs

Signal progression and the number of stops and slow downs are similar metrics that both determine a vehicle’s “quality of progression.” This is a measure of how smoothly a motorist is able to move along a coordinated signalized corridor.

Signal progression measures the portion of vehicles that stop or slow down at each intersection as they travel along the corridor. The results are reported in the percentage of time a vehicle is stopped (less than 5 mph), slowed down (5 mph to 20 mph), or continues (greater than 20 mph) as it travels through each intersection. The AM peak period and PM peak period results are reported in **Table 12** and **Table 13**, respectively.

The corridor retiming projects resulted in reducing the percentage of stops at intersections for 99 of 188 intersections (53%) during the AM peak period and 81 of 188 intersections (43%) during the PM peak period.

The average number of stops and slow downs measures the average number of stops and slow downs a motorist makes when traveling along the entire length of a corridor. This metric differs from signal progression because it compares corridor wide operations as opposed to intersection level operations. Results are reported in **Table 14**.

The corridor retiming projects resulted in reducing the average number of stops for drivers at 17 of 27 corridors (63%) during the AM peak period and 17 of 27 corridors (63%) during the PM peak period.

Table 12: AM Signal Progression

Int ID	Intersection Name	Percent of Motorists who Continue, Slow Down, and Stop (%)																							
		Eastbound						Northbound						Westbound						Southbound					
		Before			After			Before			After			Before			After			Before			After		
		Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop
1_1	Hiawasse Rd & Mardell Ct	0%	50%	50%	0%	29%	71%	85%	4%	11%	84%	4%	12%	92%	4%	4%	92%	3%	5%	0%	10%	90%	0%	0%	100%
1_2	Hiawasse Rd & Hunterdon Dr	7%	14%	79%	0%	19%	81%	83%	4%	13%	84%	4%	12%	91%	4%	6%	84%	5%	11%	0%	14%	86%	0%	14%	86%
1_3	Hiawasse Rd & Westpointe Blvd	13%	20%	67%	13%	22%	66%	32%	7%	61%	33%	7%	60%	48%	9%	43%	47%	10%	43%	3%	23%	75%	2%	20%	78%
1_4	Hiawasse Rd & Turkey Lake Rd	0%	25%	75%	0%	33%	67%	76%	7%	18%	75%	6%	19%	70%	6%	24%	74%	7%	19%	7%	23%	70%	8%	23%	69%
1_5	Hiawasse Rd & Metrowest Blvd	-	-	-	-	-	-	52%	13%	35%	56%	12%	33%	46%	6%	49%	44%	9%	47%	11%	35%	54%	11%	32%	57%
1_6	Hiawasse Rd & Seminole Rd	0%	27%	73%	0%	44%	56%	97%	2%	1%	96%	4%	1%	92%	4%	3%	92%	5%	2%	0%	35%	65%	0%	39%	61%
1_7	Hiawasse Rd & Raleigh St	0%	42%	58%	0%	26%	74%	69%	5%	26%	44%	11%	45%	43%	3%	54%	41%	6%	53%	21%	32%	48%	17%	30%	53%
2_1	Metrowest Blvd & Metrocenter Blvd	22%	14%	64%	21%	14%	65%	16%	21%	63%	15%	26%	59%	17%	50%	33%	18%	24%	58%	34%	10%	56%	46%	11%	43%
2_2	Metrowest Blvd & Wilshire Dr	69%	11%	20%	83%	9%	8%	12%	30%	59%	6%	30%	64%	0%	64%	36%	4%	50%	46%	48%	8%	44%	61%	7%	32%
3_1	Universal Blvd & I 4 EB Off Ramp	43%	17%	40%	27%	13%	60%	52%	13%	35%	35%	14%	51%	31%	5%	64%	28%	6%	66%	-	-	-	-	-	-
3_2	Universal Blvd & I 4 WB Off Ramp	96%	1%	3%	84%	3%	13%	100%	0%	0%	77%	19%	4%	98%	1%	1%	96%	3%	1%	-	-	-	-	-	-
3_3	Universal Blvd & Parking Exit	-	-	-	-	-	-	56%	8%	36%	43%	14%	43%	99%	1%	0%	98%	2%	0%	67%	25%	8%	73%	23%	4%
3_4	Universal Blvd & Hollywood Way	18%	35%	46%	13%	27%	60%	75%	3%	22%	72%	13%	15%	19%	16%	65%	15%	13%	72%	3%	25%	72%	4%	18%	78%
3_5	Universal Blvd & Universal Parking	0%	79%	21%	3%	79%	18%	43%	10%	47%	41%	6%	53%	53%	9%	39%	63%	11%	26%	0%	11%	89%	0%	40%	60%
3_6	Universal Blvd & Major Blvd	-	-	-	-	-	-	58%	25%	18%	45%	16%	39%	57%	5%	38%	50%	9%	41%	10%	20%	71%	18%	17%	65%
3_7	Universal Blvd & Loews Portofino Bay Hotel	0%	49%	51%	1%	50%	49%	55%	9%	36%	44%	22%	34%	63%	5%	32%	60%	8%	31%	8%	50%	42%	1%	30%	69%
4_1	Millenia Blvd & Radebaugh Way	17%	10%	73%	34%	15%	51%	0%	33%	67%	0%	13%	88%	6%	54%	40%	6%	52%	43%	23%	19%	57%	25%	22%	53%
4_2	Millenia Blvd & Millenia Lakes Blvd	71%	9%	20%	90%	5%	5%	5%	47%	48%	3%	35%	62%	-	-	-	-	-	-	69%	16%	16%	79%	11%	10%
4_3	Millenia Blvd & Topiary Dr	71%	6%	23%	80%	4%	16%	11%	33%	56%	4%	22%	75%	0%	14%	86%	0%	33%	67%	71%	6%	23%	78%	7%	15%
4_4	Millenia Blvd & Conservatory Ln	70%	7%	23%	47%	6%	47%	0%	63%	38%	4%	30%	65%	0%	43%	57%	0%	47%	53%	59%	6%	35%	59%	11%	30%
5_1	Vineland Rd & Radebaugh Way	-	-	-	-	-	-	63%	9%	28%	63%	11%	26%	51%	8%	41%	55%	8%	38%	14%	37%	48%	16%	34%	50%
5_2	Vineland Rd & Walden Cr	2%	19%	79%	2%	14%	83%	69%	6%	25%	79%	6%	15%	41%	14%	45%	64%	12%	24%	0%	47%	53%	0%	19%	81%
6_1	Apopka Vineland Rd & Bay Side Dr	3%	9%	89%	3%	13%	83%	78%	6%	15%	94%	2%	4%	79%	7%	15%	90%	4%	6%	2%	41%	58%	3%	28%	68%
6_2	Apopka Vineland Rd & Woodbreeze Blvd	0%	15%	85%	10%	10%	80%	63%	9%	28%	64%	7%	28%	66%	8%	27%	66%	8%	27%	2%	26%	72%	4%	29%	67%
6_3	Apopka Vineland Rd & Horizon Cr	1%	25%	74%	1%	20%	80%	73%	12%	15%	76%	9%	15%	72%	8%	20%	82%	5%	13%	0%	19%	81%	0%	20%	80%
6_4	Apopka Vineland Rd & CR 439	12%	13%	76%	14%	12%	74%	23%	15%	62%	32%	12%	56%	28%	9%	62%	21%	9%	70%	14%	13%	73%	28%	17%	56%
6_5	Apopka Vineland Rd & Olympia HS	-	-	-	-	-	-	76%	8%	15%	69%	8%	23%	81%	6%	13%	83%	4%	14%	0%	38%	62%	0%	19%	80%
6_6	Apopka Vineland Rd & Westminster Abbey Blvd	3%	21%	76%	3%	13%	83%	66%	6%	29%	73%	3%	24%	56%	8%	36%	61%	8%	31%	1%	3%	96%	0%	5%	95%
6_7	Apopka Vineland Rd & Westover Roberts Rd	5%	25%	70%	4%	24%	72%	67%	9%	24%	77%	6%	17%	57%	11%	33%	74%	4%	22%	-	-	-	-	-	-
6_8	Apopka Vineland Rd & Steer Lake Rd	10%	15%	75%	8%	11%	81%	59%	6%	35%	59%	7%	35%	50%	7%	44%	45%	8%	48%	15%	13%	72%	15%	14%	71%
7_1	Conroy Windermere Rd & Shopping Center	80%	4%	16%	87%	3%	10%	13%	0%	88%	0%	16%	84%	1%	23%	76%	1%	14%	85%	65%	10%	25%	68%	11%	21%
7_2	Conroy Windermere Rd & Lincoln Ave	74%	4%	22%	50%	20%	29%	0%	36%	64%	4%	30%	66%	13%	17%	70%	9%	15%	76%	59%	9%	32%	73%	12%	15%
7_3	Conroy Windermere Rd & Dr. Phillips Blvd	71%	11%	19%	73%	10%	17%	13%	18%	69%	8%	21%	71%	0%	2%	98%	0%	0%	100	28%	9%	62%	41%	15%	44%
7_4	Conroy Windermere Rd & CR 439	68%	6%	27%	63%	5%	32%	5%	23%	72%	5%	20%	76%	22%	15%	63%	24%	14%	63%	50%	6%	45%	55%	10%	35%
7_5	Conroy Windermere Rd & Conroy Club Dr	58%	6%	36%	72%	4%	24%	17%	8%	75%	11%	7%	81%	0%	11%	89%	0%	9%	91%	43%	5%	52%	42%	7%	51%
8A_1	Good Homes Rd & SR 408 WB Off Ramp	59%	12%	29%	74%	11%	15%	-	-	-	-	-	-	12%	8%	80%	12%	8%	81%	61%	9%	30%	73%	7%	20%
8A_2	Good Homes Rd & SR 408 EB Ramp	49%	12%	39%	52%	9%	39%	-	-	-	-	-	-	9%	21%	70%	8%	20%	72%	66%	22%	13%	65%	21%	14%
8A_3	Old Winter Garden Rd & Good Homes Rd	16%	20%	63%	18%	18%	63%	-	-	-	-	-	-	-	-	-	-	-	-	21%	32%	47%	19%	14%	67%
8A_4	Good Homes Rd & Apopka Vineland Rd	30%	29%	41%	28%	45%	27%	18%	14%	68%	17%	12%	71%	0%	4%	96%	0%	9%	91%	36%	7%	56%	54%	6%	40%
8A_5	Good Homes Rd & Killington Way	81%	5%	14%	80%	4%	16%	-	-	-	-	-	-	1%	36%	63%	4%	22%	74%	81%	5%	13%	85%	6%	8%

Table 12 Cont.: AM Signal Progression

Int ID	Intersection Name	Percent of Motorists who Continue, Slow Down, and Stop (%)																							
		Eastbound						Northbound						Westbound						Southbound					
		Before			After			Before			After			Before			After			Before			After		
		Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop
8A_6	Good Homes Rd & Steer Lake Rd	80%	6%	14%	78%	7%	15%	6%	30%	63%	5%	23%	72%	0%	31%	69%	4%	19%	77%	72%	8%	19%	66%	9%	25%
8A_7	Good Homes Rd & Dorscher Rd	66%	7%	27%	64%	7%	29%	0%	17%	83%	1%	21%	78%	8%	13%	78%	3%	9%	89%	78%	9%	13%	76%	11%	13%
8A_8	Good Homes Rd & Hiwassee Rd	16%	11%	73%	24%	11%	65%	23%	14%	63%	13%	8%	79%	18%	10%	73%	10%	8%	83%	17%	13%	69%	15%	14%	71%
8A_9	Good Homes Rd & Powers Dr	58%	20%	22%	36%	8%	55%	-	-	-	-	-	-	17%	19%	63%	15%	20%	65%	59%	15%	25%	34%	17%	49%
8B_1	Good Homes Rd & Nome Dr	48%	13%	39%	47%	12%	41%	4%	7%	89%	1%	21%	78%	15%	22%	63%	9%	20%	70%	57%	14%	29%	45%	18%	37%
8B_2	Good Homes Rd & Ivey Ln	63%	17%	20%	66%	12%	22%	17%	9%	74%	20%	11%	70%	-	-	-	-	-	-	58%	13%	29%	59%	12%	29%
8B_3	Good Homes Rd & Mercy Dr	61%	13%	26%	62%	14%	23%	19%	27%	53%	23%	34%	43%	8%	10%	81%	7%	9%	84%	55%	16%	29%	50%	18%	33%
8B_4	Good Homes Rd & SR 408 WB	59%	8%	33%	56%	10%	34%	17%	13%	70%	11%	13%	76%	-	-	-	-	-	-	58%	10%	31%	74%	5%	21%
8B_5	Good Homes Rd & Ferguson Dr	67%	11%	22%	69%	11%	20%	8%	7%	84%	6%	8%	86%	13%	26%	61%	6%	30%	64%	70%	6%	24%	69%	10%	21%
9A_1	Clarcona Ocoee Rd & SR 437	13%	14%	73%	20%	13%	68%	22%	21%	57%	18%	19%	63%	23%	11%	66%	11%	8%	82%	15%	14%	71%	24%	15%	61%
9A_2	Clarcona Ocoee Rd & SR 429 SB On Ramp	47%	28%	26%	57%	19%	24%	-	-	-	-	-	-	3%	15%	82%	3%	13%	84%	55%	17%	29%	53%	16%	31%
9A_3	Clarcona Ocoee Rd & SR 429 NB Off Ramp	84%	7%	8%	77%	8%	14%	58%	11%	31%	60%	9%	31%	0%	0%	100	0%	0%	0%	88%	3%	9%	81%	7%	12%
9A_4	Clarcona Ocoee Rd & Lakewood Ave	81%	9%	10%	69%	10%	20%	5%	20%	75%	4%	22%	74%	-	-	-	-	-	-	58%	10%	32%	59%	12%	29%
9A_5	Clarcona Ocoee Rd & Adair St	78%	9%	13%	73%	11%	17%	8%	13%	79%	10%	16%	74%	0%	6%	94%	0%	20%	80%	67%	9%	24%	61%	10%	29%
9A_6	Clarcona Ocoee Rd & Clark Rd	33%	18%	49%	49%	18%	33%	17%	26%	57%	9%	14%	77%	9%	25%	66%	13%	15%	72%	41%	12%	47%	57%	7%	36%
9A_7	Clarcona Ocoee Rd & Apopka Vineland Rd	23%	8%	68%	23%	13%	64%	9%	8%	83%	6%	6%	88%	13%	11%	76%	13%	13%	74%	26%	12%	62%	20%	13%	67%
9B_1	Clarcona Ocoee Rd & Beggs Rd	71%	10%	19%	68%	10%	22%	-	-	-	-	-	-	8%	19%	73%	10%	23%	67%	86%	4%	10%	83%	5%	12%
9B_2	Clarcona Ocoee Rd & Hiwassee Rd	13%	10%	76%	15%	11%	74%	18%	15%	67%	10%	9%	81%	22%	14%	64%	11%	9%	79%	16%	12%	72%	19%	11%	70%
9B_3	Clarcona Ocoee Rd & Powers Dr	78%	14%	8%	75%	17%	8%	7%	14%	80%	4%	15%	82%	-	-	-	-	-	-	76%	4%	21%	74%	5%	21%
9B_4	Clarcona Ocoee Rd & Lake Sparling Rd	83%	5%	12%	51%	13%	36%	6%	8%	86%	4%	11%	85%	6%	14%	79%	6%	17%	77%	86%	6%	8%	82%	8%	10%
9B_5	Clarcona Ocoee Rd & Pine Hills Rd	33%	22%	45%	41%	16%	43%	17%	15%	68%	15%	15%	71%	20%	18%	63%	10%	18%	72%	35%	7%	58%	26%	10%	64%
9B_6	Clarcona Ocoee Rd & Rose Ave	84%	9%	7%	86%	7%	7%	0%	27%	73%	6%	12%	82%	7%	36%	58%	5%	37%	58%	79%	6%	15%	81%	7%	11%
10A_1	Beggs Rd & Overland Rd	70%	9%	21%	48%	15%	37%	-	-	-	-	-	-	4%	12%	83%	3%	19%	78%	55%	36%	9%	50%	32%	18%
10A_2	Beggs Rd & Pine Hills Rd	41%	24%	34%	35%	21%	44%	16%	23%	61%	8%	24%	68%	-	-	-	-	-	-	25%	9%	66%	34%	12%	55%
10A_3	Beggs Rd & Rose Ave	48%	22%	30%	39%	24%	37%	6%	11%	82%	8%	18%	74%	13%	29%	58%	10%	28%	62%	36%	20%	45%	30%	17%	53%
10A_4	Beggs Rd & Mott Rd	68%	15%	17%	54%	28%	18%	19%	50%	31%	16%	34%	50%	7%	19%	74%	8%	15%	77%	71%	18%	11%	67%	16%	17%
10B_1	Beggs Rd & Magnolia Holmes Rd	44%	13%	43%	57%	11%	32%	4%	4%	93%	8%	4%	88%	13%	13%	75%	15%	15%	70%	66%	12%	22%	74%	9%	17%
10B_2	Beggs Rd & Clarcona Ocoee Rd	66%	7%	27%	76%	7%	17%	25%	31%	44%	19%	32%	50%	-	-	-	-	-	-	45%	5%	50%	55%	2%	43%
10B_3	Beggs Rd & All American Blvd	31%	8%	60%	38%	7%	55%	13%	17%	70%	16%	17%	67%	13%	17%	70%	1%	11%	87%	31%	10%	59%	60%	9%	31%
11_1	John Young Parkway & 35th St	2%	5%	93%	0%	0%	100	44%	9%	47%	37%	8%	55%	81%	4%	15%	84%	3%	13%	4%	34%	62%	2%	18%	80%
11_2	John Young Parkway & I 4 EB Ramp	23%	12%	66%	22%	11%	66%	58%	25%	16%	61%	27%	12%	70%	12%	18%	65%	7%	28%	-	-	-	-	-	-
11_4	John Young Parkway & L.B. Mc Leod Rd	17%	9%	73%	8%	9%	83%	24%	12%	64%	38%	18%	44%	38%	14%	48%	51%	14%	35%	18%	6%	76%	9%	8%	84%
11_5	John Young Parkway & Clear Way	-	-	-	-	-	-	87%	7%	6%	82%	7%	11%	57%	15%	29%	75%	13%	12%	0%	24%	76%	0%	20%	80%
11_6	John Young Parkway & Ramp To John Young Pkwy	81%	14%	6%	79%	16%	5%	98%	0%	2%	100%	0%	0%	86%	6%	9%	93%	4%	3%	-	-	-	-	-	-
11_7	John Young Parkway & Shopping Center Drway	7%	27%	66%	7%	33%	61%	87%	1%	12%	94%	0%	5%	65%	13%	23%	95%	5%	0%	0%	0%	100%	0%	0%	100%
11_8	John Young Parkway & Raleigh St	27%	14%	60%	11%	27%	62%	27%	5%	67%	77%	4%	19%	25%	6%	69%	86%	5%	9%	-	-	-	-	-	-
11_9	John Young Parkway & Monte Carlo Trail	6%	52%	42%	16%	37%	47%	61%	6%	33%	94%	1%	4%	96%	1%	3%	95%	2%	3%	-	-	-	-	-	-
11_10	John Young Parkway & Orange Center Blvd	15%	16%	69%	14%	0%	86%	31%	20%	48%	75%	5%	20%	53%	3%	44%	76%	5%	19%	22%	16%	62%	17%	14%	69%
11_11	John Young Parkway & C R Smith St	7%	32%	61%	7%	31%	62%	97%	1%	2%	95%	1%	4%	70%	8%	22%	83%	5%	11%	-	-	-	-	-	-
12_1	SR 426 & Old Howell Branch Rd	63%	13%	24%	58%	15%	28%	-	-	-	-	-	-	18%	25%	56%	11%	26%	63%	92%	3%	5%	85%	3%	12%

Table 12 Cont.: AM Signal Progression

Int ID	Intersection Name	Percent of Motorists who Continue, Slow Down, and Stop (%)																							
		Eastbound						Northbound						Westbound						Southbound					
		Before			After			Before			After			Before			After			Before			After		
		Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop
12_2	SR 426 & Hall Rd	30%	9%	61%	31%	9%	60%	19%	7%	74%	10%	8%	82%	7%	9%	84%	5%	7%	88%	15%	13%	72%	23%	8%	69%
12_3	SR 426 & Trinity Prep Ln	95%	2%	3%	90%	1%	9%	0%	10%	90%	0%	17%	83%	-	-	-	-	-	-	84%	7%	9%	79%	10%	12%
12_4	SR 426 & S Tuskawilla Rd	13%	7%	80%	19%	9%	71%	3%	3%	94%	0%	14%	86%	15%	11%	74%	17%	13%	70%	41%	29%	30%	40%	30%	29%
12_5	SR 426 & Clayton Crossing Way	41%	19%	40%	34%	11%	55%	4%	21%	75%	4%	18%	78%	2%	9%	90%	2%	15%	84%	32%	13%	55%	22%	14%	64%
12_6	SR 426 & SR 417 SB On Ramp	84%	3%	13%	84%	3%	14%	-	-	-	-	-	-	85%	2%	12%	88%	3%	10%	76%	16%	8%	74%	17%	9%
12_7	SR 426 & Seminole Expressway NB Ramp	74%	13%	13%	84%	7%	9%	22%	12%	66%	25%	8%	67%	-	-	-	-	-	-	46%	11%	43%	54%	15%	32%
12_8	SR 426 & Dean Rd	58%	13%	30%	59%	17%	24%	10%	23%	67%	14%	14%	72%	0%	50%	50%	0%	33%	67%	40%	8%	53%	46%	5%	49%
13_1	SR 434 & Manor Ave	63%	11%	27%	54%	10%	36%	0%	25%	75%	0%	0%	0%	7%	25%	68%	0%	14%	86%	72%	19%	9%	72%	25%	4%
13_2	SR 434 & Montgomery Rd	29%	14%	58%	30%	18%	53%	4%	9%	87%	12%	4%	84%	10%	10%	80%	7%	19%	75%	43%	25%	31%	37%	23%	40%
13_3	SR 434 & Springs Blvd	84%	5%	11%	92%	0%	8%	0%	25%	75%	0%	0%	0%	2%	23%	75%	8%	15%	77%	78%	9%	14%	74%	5%	21%
13_4	SR 434 & Spring Centre Blvd	91%	3%	6%	95%	3%	2%	0%	14%	86%	0%	0%	100	-	-	-	-	-	-	82%	8%	10%	95%	4%	1%
13_5	SR 434 & Douglas Ave	28%	8%	64%	18%	11%	71%	7%	5%	88%	21%	29%	50%	13%	18%	69%	9%	18%	73%	23%	15%	61%	29%	12%	59%
13_6	SR 434 & I-4 Ramps	85%	10%	5%	91%	8%	1%	-	-	-	-	-	-	19%	14%	66%	18%	22%	60%	76%	18%	6%	80%	13%	7%
13_7	SR 434 & I-4 Ramps	39%	6%	54%	36%	9%	55%	79%	4%	17%	84%	5%	11%	-	-	-	-	-	-	68%	13%	19%	63%	18%	19%
13_8	SR 434 & Raymond Ave	58%	14%	28%	61%	9%	30%	7%	6%	87%	13%	0%	88%	0%	26%	74%	0%	33%	67%	25%	18%	57%	21%	0%	79%
13_9	SR 434 & Roxboro Rd	95%	1%	4%	91%	2%	7%	0%	40%	60%	0%	0%	0%	4%	32%	64%	0%	50%	50%	93%	3%	3%	87%	9%	4%
13_10	SR 434 & Tollgate Trl	94%	0%	6%	88%	2%	10%	-	-	-	-	-	-	0%	23%	77%	0%	0%	100	83%	3%	14%	95%	0%	5%
13_11	SR 434 & Palm Spings Rd	20%	9%	71%	58%	13%	29%	4%	30%	66%	0%	35%	65%	8%	16%	76%	0%	0%	0%	73%	5%	22%	77%	3%	20%
13_12	SR 434 & Range Line Rd	70%	5%	25%	23%	20%	58%	0%	13%	87%	0%	14%	86%	6%	25%	69%	14%	29%	57%	43%	18%	39%	38%	19%	44%
13_13	SR 434 & Florida Central Pkwy	59%	20%	21%	66%	16%	18%	6%	19%	75%	0%	33%	67%	0%	30%	70%	0%	0%	0%	69%	9%	21%	83%	6%	11%
13_14	SR 434 & CR 427	34%	18%	48%	40%	16%	44%	10%	13%	78%	17%	11%	72%	6%	13%	80%	8%	16%	76%	16%	12%	71%	24%	9%	67%
13_15	SR 434 & S Grant St	61%	14%	25%	61%	16%	23%	3%	34%	63%	0%	33%	67%	6%	22%	72%	0%	50%	50%	67%	10%	23%	67%	12%	21%
13_16	SR 434 & S Wayman St	84%	4%	11%	92%	5%	3%	-	-	-	-	-	-	0%	31%	69%	0%	0%	0%	75%	13%	12%	78%	11%	11%
14_1	US 17/92 & Orange Blvd	10%	21%	69%	8%	23%	70%	49%	12%	40%	58%	8%	34%	31%	19%	50%	44%	22%	35%	100	0%	0%	67%	33%	0%
14_2	US 17/92 & Orange Blvd	-	-	-	-	-	-	21%	16%	63%	16%	15%	69%	57%	13%	30%	68%	11%	21%	74%	8%	18%	68%	12%	20%
14_3	US 17/92 & SR 15 To I 4	77%	7%	17%	92%	7%	1%	70%	6%	24%	73%	6%	21%	36%	24%	39%	57%	20%	23%	0%	6%	94%	0%	10%	90%
15_1	SR 436 & Sand Lake Rd	71%	7%	22%	70%	8%	22%	-	-	-	-	-	-	11%	26%	63%	9%	19%	72%	85%	4%	11%	83%	2%	15%
15_2	SR 436 & Balmy Beach Dr	45%	12%	43%	48%	11%	40%	8%	15%	77%	5%	14%	81%	0%	22%	78%	0%	14%	86%	72%	5%	23%	68%	7%	25%
15_3	SR 436 & Hunt Club Blvd	69%	5%	27%	73%	5%	22%	0%	18%	82%	0%	13%	87%	5%	16%	79%	6%	14%	80%	24%	18%	58%	40%	15%	45%
15_4	SR 436 & Bear Lake Rd	42%	12%	46%	46%	17%	37%	7%	14%	79%	7%	12%	81%	-	-	-	-	-	-	76%	7%	17%	80%	1%	19%
15_5	SR 436 & Harley Lester Ln	96%	3%	1%	97%	2%	1%	0%	17%	83%	0%	13%	88%	0%	20%	80%	13%	38%	50%	97%	2%	1%	97%	1%	2%
15_6	SR 436 & Campus Loop	84%	2%	15%	94%	2%	4%	0%	8%	92%	0%	11%	89%	0%	33%	67%	0%	0%	100	89%	2%	8%	96%	0%	4%
15_7	SR 436 & Academy Dr	56%	13%	31%	80%	1%	19%	6%	18%	76%	17%	17%	67%	6%	18%	76%	4%	15%	80%	79%	6%	15%	45%	15%	40%
15_8	SR 436 & McNeil Rd	69%	5%	26%	47%	19%	35%	11%	13%	76%	9%	14%	77%	0%	31%	69%	8%	16%	76%	83%	5%	12%	89%	1%	10%
15_9	SR 436 & Maple St	89%	1%	11%	91%	1%	8%	0%	45%	55%	0%	41%	59%	0%	13%	88%	4%	16%	80%	74%	8%	18%	71%	8%	22%
15_10	SR 436 & SR 434	27%	15%	58%	27%	16%	57%	25%	17%	57%	21%	17%	62%	29%	17%	54%	23%	16%	61%	17%	18%	66%	24%	14%	62%
15_11	SR 436 & Laurel St	69%	3%	28%	57%	2%	41%	5%	38%	57%	11%	40%	48%	5%	25%	70%	0%	13%	87%	39%	7%	54%	33%	9%	58%
16_1	SR 434 & 414 Ramps	32%	26%	42%	25%	24%	51%	54%	4%	42%	52%	6%	42%	64%	22%	14%	67%	21%	12%	-	-	-	-	-	-
16_2	SR 434 & 414 Ramps	-	-	-	-	-	-	94%	6%	0%	96%	4%	0%	50%	8%	42%	54%	9%	37%	23%	44%	33%	24%	38%	38%
16_3	SR 434 & Gateway Dr	6%	15%	79%	6%	14%	80%	46%	6%	48%	45%	9%	46%	64%	4%	32%	63%	3%	34%	6%	17%	78%	6%	17%	77%

Table 12 Cont.: AM Signal Progression

Int ID	Intersection Name	Percent of Motorists who Continue, Slow Down, and Stop (%)																							
		Eastbound						Northbound						Westbound						Southbound					
		Before			After			Before			After			Before			After			Before			After		
		Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop
16_4	SR 434 & Lotus Landing Blvd	0%	11%	89%	7%	5%	88%	83%	4%	13%	84%	6%	11%	61%	14%	25%	74%	9%	17%	10%	20%	70%	18%	5%	78%
16_5	SR 434 & Bunnell Rd	8%	13%	79%	10%	20%	70%	36%	17%	47%	31%	18%	50%	40%	21%	39%	38%	21%	41%	7%	8%	85%	5%	8%	87%
16_6	SR 434 & Orange Ave	0%	25%	75%	0%	21%	79%	37%	19%	43%	42%	17%	41%	45%	11%	44%	42%	12%	45%	4%	15%	81%	8%	17%	75%
16_7	SR 434 & SR436	25%	17%	58%	23%	20%	56%	25%	17%	57%	22%	17%	61%	29%	18%	53%	23%	17%	61%	19%	17%	65%	25%	14%	60%
16_8	SR 434 & Cape Cod Ln	0%	27%	73%	0%	9%	91%	76%	10%	14%	76%	10%	14%	87%	8%	4%	86%	10%	5%	6%	19%	75%	0%	8%	92%
16_9	SR 434 & Sand Lake Rd	9%	20%	71%	9%	18%	73%	71%	5%	24%	75%	2%	22%	56%	15%	29%	59%	19%	23%	0%	14%	86%	0%	50%	50%
16_10	SR 434 & Jamestown Blvd	0%	8%	92%	0%	27%	73%	44%	20%	36%	51%	20%	29%	47%	11%	42%	54%	12%	34%	7%	16%	78%	5%	19%	75%
16_11	SR 434 & E Lake Brantley Dr	4%	24%	72%	4%	24%	72%	49%	19%	33%	45%	13%	42%	66%	11%	24%	56%	11%	32%	0%	50%	50%	0%	19%	81%
17_1W	Sand Lake Rd & Oak Haven Dr	37%	28%	35%	41%	26%	33%	0%	0%	100	0%	0%	100	7%	23%	70%	12%	21%	67%	48%	19%	32%	59%	14%	27%
17_2W	Sand Lake Rd & Hickory Dr	49%	17%	33%	54%	16%	30%	9%	24%	67%	13%	21%	66%	0%	20%	80%	0%	23%	77%	57%	12%	32%	54%	11%	35%
17_3A	Sand Lake Rd & Lake Brantley High School Drway	45%	19%	35%	46%	18%	36%	2%	10%	88%	1%	12%	87%	0%	55%	45%	0%	56%	44%	46%	13%	41%	50%	14%	36%
17_4W	Sand Lake Rd & Lake Brantley High Back Entrance	56%	19%	25%	50%	19%	32%	-	-	-	-	-	-	2%	15%	84%	1%	21%	78%	69%	16%	16%	66%	17%	17%
17_1W	Sand Lake Rd & Oak Haven Dr	62%	9%	28%	55%	13%	32%	0%	0%	0%	0%	100	0%	9%	23%	67%	4%	14%	82%	52%	20%	27%	52%	26%	22%
17_2W	Sand Lake Rd & Lake Brantley High School Drway	51%	19%	30%	55%	17%	28%	5%	14%	81%	17%	12%	71%	0%	0%	100	0%	25%	75%	62%	10%	28%	57%	11%	31%
17_3A	Sand Lake Rd & Lake Brantley High School Drway	71%	11%	18%	83%	9%	9%	0%	46%	54%	0%	0%	0%	4%	48%	48%	0%	26%	74%	68%	10%	22%	86%	10%	5%
17_4W	Sand Lake Rd & Lake Brantley High Back Entrance	82%	7%	11%	89%	3%	8%	-	-	-	-	-	-	0%	9%	91%	0%	21%	79%	83%	10%	7%	86%	9%	5%
18_1	US 192 & SR 91 NB Off Ramp	69%	4%	27%	86%	1%	12%	12%	6%	82%	14%	7%	79%	2%	13%	85%	4%	13%	83%	67%	7%	26%	73%	9%	19%
18_2	US 192 & Commerce center Dr	25%	8%	67%	62%	6%	32%	11%	26%	63%	12%	19%	69%	8%	28%	63%	8%	28%	64%	57%	10%	33%	58%	10%	32%
18_3	US 192 & Old Canoe Creek Rd	65%	7%	28%	69%	11%	21%	12%	20%	67%	15%	19%	66%	5%	12%	83%	4%	9%	87%	52%	8%	40%	63%	10%	27%
18_4	US 192 & Brown Chapel Rd	77%	8%	15%	76%	8%	15%	6%	31%	63%	7%	31%	62%	10%	24%	66%	7%	23%	70%	63%	6%	31%	45%	10%	45%
18_5	US 192 & Big Lots	80%	3%	16%	89%	3%	8%	0%	30%	70%	3%	28%	69%	-	-	-	-	-	-	91%	1%	7%	87%	5%	8%
18_6	US 192 & Budinger Ave	47%	11%	42%	42%	15%	44%	7%	16%	77%	7%	10%	83%	4%	15%	81%	4%	16%	80%	43%	13%	44%	66%	10%	24%
18_7	US 192 & Tennessee Ave	64%	10%	26%	88%	5%	7%	3%	23%	75%	2%	30%	68%	4%	13%	82%	4%	16%	80%	62%	17%	21%	88%	6%	7%
18_8	US 192 & CR 523	25%	10%	65%	62%	11%	27%	11%	15%	74%	15%	17%	68%	1%	8%	91%	4%	12%	84%	65%	9%	26%	40%	14%	46%
18_9	US 192 & New York Ave	70%	10%	20%	70%	12%	18%	3%	3%	95%	2%	15%	83%	0%	23%	77%	1%	16%	83%	62%	14%	24%	84%	8%	9%
18_10	US 192 & Creek Woods Dr	53%	18%	28%	73%	10%	18%	2%	26%	71%	3%	20%	77%	11%	12%	77%	10%	9%	81%	57%	13%	30%	74%	9%	17%
18_11	US 192 & Delaware Ave	86%	4%	11%	92%	2%	6%	2%	10%	88%	3%	10%	87%	6%	12%	82%	2%	9%	89%	64%	18%	18%	59%	21%	21%
18_12	US 192 & CR 534	48%	15%	37%	69%	9%	22%	13%	20%	67%	10%	18%	71%	17%	35%	48%	10%	39%	51%	49%	10%	41%	54%	7%	39%
19_1	CR 532 & Masters Blvd	45%	10%	45%	56%	6%	38%	-	-	-	-	-	-	9%	16%	75%	6%	13%	81%	31%	26%	42%	35%	22%	43%
19_2	CR 532 & Calder Blvd	41%	15%	43%	24%	17%	58%	2%	13%	85%	1%	17%	83%	8%	20%	73%	5%	18%	78%	42%	17%	41%	59%	13%	28%
19_3	CR 532 & I 4 WB Off Ramp	10%	21%	69%	9%	19%	72%	-	-	-	-	-	-	35%	17%	48%	40%	17%	44%	74%	18%	8%	68%	21%	11%
19_4	CR 532 & CR 532 To I-4	49%	40%	12%	24%	30%	46%	70%	2%	29%	79%	3%	19%	-	-	-	-	-	-	24%	15%	62%	6%	10%	84%
19_5	CR 532 & Heritage Pass	60%	12%	28%	52%	15%	33%	17%	80%	3%	13%	82%	5%	0%	50%	50%	0%	45%	55%	61%	10%	29%	61%	7%	32%
19_6	CR 532 & Legacy Village Dr	97%	3%	0%	99%	1%	0%	0%	64%	36%	0%	33%	67%	0%	50%	50%	0%	40%	60%	99%	1%	1%	99%	1%	0%
19_7	CR 532 & Reunion Blvd	84%	9%	7%	73%	12%	15%	0%	33%	67%	0%	0%	100	0%	18%	82%	3%	31%	66%	85%	8%	7%	89%	4%	7%
19_8	CR 532 & Old lake Wilson Rd	20%	26%	54%	11%	20%	69%	49%	38%	13%	49%	37%	14%	13%	15%	72%	11%	12%	77%	17%	16%	67%	7%	17%	76%
20_1	Good Homes Rd & Balboa Dr	-	-	-	-	-	-	60%	16%	24%	51%	20%	29%	62%	13%	25%	68%	11%	20%	10%	19%	70%	7%	13%	80%
20_2	Good Homes Rd & E Orolando Ave	10%	22%	68%	4%	22%	74%	45%	17%	39%	39%	19%	42%	54%	12%	35%	50%	11%	39%	5%	5%	89%	6%	9%	85%
21_1	Pine Hills Rd & Balboa Dr	8%	16%	77%	10%	23%	67%	61%	11%	29%	59%	11%	30%	69%	13%	18%	65%	10%	24%	3%	3%	95%	0%	9%	91%
21_2	Pine Hills Rd & Dolores Dr	0%	0%	100	0%	0%	0%	86%	5%	9%	88%	6%	6%	84%	6%	11%	87%	5%	9%	0%	49%	51%	5%	71%	24%

Table 12 Cont.: AM Signal Progression

Int ID	Intersection Name	Percent of Motorists who Continue, Slow Down, and Stop (%)																							
		Eastbound						Northbound						Westbound						Southbound					
		Before			After			Before			After			Before			After			Before			After		
		Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop
21_3	Pine Hills Rd & Hernandes Dr	0%	9%	91%	6%	25%	69%	76%	7%	17%	71%	8%	22%	83%	11%	6%	71%	6%	23%	33%	35%	33%	23%	34%	43%
21_4	Pine Hills Rd & Indialantic Dr	12%	17%	71%	5%	9%	86%	35%	16%	49%	71%	12%	17%	33%	7%	59%	55%	13%	31%	7%	20%	73%	1%	31%	68%
21_5	Pine Hills Rd & SR 438	27%	18%	55%	10%	15%	75%	11%	11%	78%	15%	13%	72%	13%	8%	79%	10%	11%	79%	22%	12%	66%	14%	8%	78%
21_6	Pine Hills Rd & Belco Dr	9%	24%	66%	7%	20%	73%	45%	19%	36%	76%	6%	17%	64%	13%	23%	63%	13%	24%	0%	0%	100%	0%	0%	100%
21_7	Pine Hills Rd & Londonderry Blvd	-	-	-	-	-	-	48%	13%	39%	49%	18%	33%	66%	7%	27%	74%	6%	20%	3%	19%	78%	0%	17%	83%
21_8	Pine Hills Rd & Indian Hills Rd	8%	29%	63%	3%	19%	77%	75%	8%	17%	80%	4%	16%	63%	12%	25%	54%	16%	29%	-	-	-	-	-	-
21_9	Pine Hills Rd & North Lane	18%	11%	70%	7%	18%	74%	23%	20%	56%	19%	18%	63%	31%	12%	56%	27%	10%	63%	22%	24%	54%	18%	20%	62%
22_1	Maitland Ave & E Horatio Ave	7%	35%	58%	0%	29%	71%	22%	10%	68%	19%	10%	71%	26%	12%	62%	28%	10%	62%	8%	27%	65%	5%	24%	71%
22_2	Maitland Ave & Sandspur Rd	2%	15%	84%	0%	18%	82%	61%	12%	27%	60%	14%	25%	29%	17%	55%	75%	10%	16%	-	-	-	-	-	-
22_3	Maitland Ave & Marion Way	0%	25%	75%	0%	11%	89%	59%	13%	29%	51%	13%	36%	65%	10%	25%	74%	8%	17%	2%	17%	81%	0%	15%	85%
22_4	Maitland Ave & SR 414	31%	12%	56%	26%	13%	61%	11%	6%	83%	6%	7%	87%	13%	10%	77%	12%	14%	75%	24%	6%	70%	21%	6%	72%
23_1	Hiawasse Rd & Edgewater Dr	8%	16%	76%	8%	17%	75%	46%	10%	44%	50%	7%	43%	55%	6%	39%	74%	4%	23%	10%	11%	79%	7%	2%	90%
23_2	Hiawasse Rd & Walmart	3%	17%	80%	3%	24%	74%	68%	10%	21%	70%	5%	25%	58%	14%	28%	75%	9%	16%	1%	19%	80%	0%	15%	85%
24_1	Hiawasse Rd & SR 408 EB	51%	16%	33%	50%	16%	34%	49%	16%	35%	60%	26%	14%	74%	4%	21%	62%	3%	35%	-	-	-	-	-	-
24_2	Hiawasse Rd & SR 408 WB	-	-	-	-	-	-	77%	2%	21%	74%	3%	23%	54%	7%	39%	74%	8%	18%	28%	21%	51%	22%	20%	59%
24_3	Hiawasse Rd & W Colonial Dr	15%	13%	71%	15%	14%	71%	8%	13%	79%	20%	6%	74%	30%	12%	58%	24%	12%	64%	54%	15%	31%	47%	16%	37%
24_4	Hiawasse Rd & Orange County MultiCultural Center	0%	18%	82%	0%	33%	67%	87%	8%	4%	92%	4%	4%	95%	2%	2%	87%	6%	7%	-	-	-	-	-	-
24_5	Hiawasse Rd & Vernon St	18%	10%	72%	13%	12%	76%	70%	9%	21%	45%	9%	46%	46%	11%	43%	39%	14%	47%	7%	5%	88%	5%	6%	89%
24_6	Hiawasse Rd & Hennepin Blvd	0%	0%	100	0%	33%	67%	55%	17%	29%	58%	20%	22%	49%	21%	30%	46%	30%	25%	4%	46%	51%	0%	51%	49%
24_7	Hiawasse Rd & SR438	13%	8%	79%	20%	9%	71%	11%	10%	78%	9%	7%	84%	13%	10%	78%	16%	12%	73%	14%	12%	74%	11%	9%	80%
24_8	Hiawasse Rd & Super Beauty Depot	0%	26%	74%	2%	27%	71%	64%	17%	19%	66%	15%	20%	74%	11%	16%	67%	13%	21%	0%	23%	77%	0%	29%	71%
24_9	Hiawasse Rd & Coral Cove Dr	3%	8%	90%	4%	20%	76%	63%	16%	21%	63%	13%	24%	75%	11%	15%	67%	8%	25%	6%	25%	69%	2%	23%	75%
24_10	Hiawasse Rd & Hiawasse Oak Dr	0%	12%	88%	0%	13%	87%	83%	1%	15%	74%	4%	23%	80%	11%	9%	73%	11%	16%	-	-	-	-	-	-
24_11	Hiawasse Rd & Clarcona Ocoee Rd	14%	11%	76%	15%	11%	74%	18%	15%	67%	10%	10%	81%	21%	14%	64%	12%	9%	79%	17%	11%	73%	19%	11%	70%
24_12	Hiawasse Rd & Beggs Rd	14%	7%	78%	7%	9%	84%	76%	5%	19%	65%	6%	29%	59%	7%	34%	59%	5%	36%	8%	9%	83%	6%	7%	87%
24_13	Hiawasse Rd & SR 414 EB Ramp	41%	33%	26%	36%	38%	27%	22%	53%	24%	20%	46%	33%	79%	19%	2%	77%	22%	1%	-	-	-	-	-	-
24_14	Hiawasse Rd & SR 414 WB Ramp	-	-	-	-	-	-	92%	8%	0%	90%	9%	1%	67%	9%	24%	61%	10%	29%	71%	20%	9%	69%	23%	8%
24_15	Hiawasse Rd & Wekiva High School	-	-	-	-	-	-	71%	16%	13%	61%	22%	17%	75%	6%	19%	72%	8%	21%	1%	18%	81%	1%	21%	78%
25_1	Park Ave & E 5th St	10%	11%	80%	9%	10%	82%	48%	30%	22%	50%	30%	21%	48%	30%	23%	55%	24%	21%	9%	34%	57%	4%	26%	69%
25_2	Park Ave & SR 500	18%	14%	68%	40%	15%	45%	10%	8%	82%	9%	9%	82%	10%	10%	80%	9%	12%	79%	26%	23%	51%	40%	21%	39%
26_1	Vick Rd & SR 500	45%	6%	50%	37%	8%	55%	12%	11%	77%	14%	13%	73%	12%	13%	76%	12%	12%	75%	15%	9%	76%	36%	10%	54%
26_2	Vick Rd & Edgewater Dr	9%	10%	81%	8%	14%	77%	40%	14%	46%	34%	11%	55%	31%	19%	50%	27%	20%	54%	5%	18%	77%	6%	23%	71%

Table 13: PM Signal Progression

Int ID	Intersection Name	Percent of Motorists who Continue, Slow Down, and Stop (%)																							
		Eastbound						Northbound						Westbound						Southbound					
		Before			After			Before			After			Before			After			Before			After		
		Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop
1_1	Hiawassee Rd & Mardell Ct	0%	18%	82%	0%	16%	84%	71%	6%	23%	72%	6%	23%	84%	6%	10%	89%	5%	7%	0%	19%	81%	0%	6%	94%
1_2	Hiawassee Rd & Hunterdon Dr	2%	34%	64%	4%	34%	63%	77%	7%	16%	80%	6%	14%	92%	3%	4%	91%	4%	5%	0%	13%	88%	3%	13%	83%
1_3	Hiawassee Rd & Westpointe Blvd	11%	18%	70%	9%	15%	76%	23%	11%	66%	20%	12%	68%	42%	9%	48%	50%	9%	41%	3%	17%	80%	4%	16%	81%
1_4	Hiawassee Rd & Turkey Lake Rd	0%	23%	77%	7%	22%	70%	73%	8%	19%	72%	8%	20%	66%	5%	29%	69%	5%	26%	11%	21%	69%	6%	19%	75%
1_5	Hiawassee Rd & Metrowest Blvd	-	-	-	-	-	-	48%	19%	33%	41%	14%	44%	51%	5%	44%	37%	10%	53%	10%	26%	64%	9%	18%	74%
1_6	Hiawassee Rd & Seminole Rd	0%	43%	57%	0%	38%	62%	98%	2%	0%	98%	1%	1%	97%	2%	1%	96%	3%	1%	1%	37%	62%	2%	31%	67%
1_7	Hiawassee Rd & Raleigh St	3%	9%	88%	2%	12%	86%	46%	7%	48%	33%	13%	54%	43%	7%	51%	35%	8%	56%	19%	29%	52%	21%	25%	54%
2_1	Metrowest Blvd & Metrocenter Blvd	22%	18%	60%	19%	20%	61%	21%	20%	59%	13%	20%	68%	24%	21%	55%	25%	20%	55%	45%	8%	47%	42%	8%	50%
2_2	Metrowest Blvd & Wilshire Dr	45%	11%	44%	72%	10%	17%	3%	9%	87%	4%	9%	88%	0%	49%	51%	0%	53%	47%	43%	13%	44%	46%	15%	39%
3_1	Universal Blvd & I 4 EB Off Ramp	57%	19%	24%	51%	21%	29%	34%	20%	46%	38%	17%	45%	29%	7%	64%	23%	12%	65%	-	-	-	-	-	-
3_2	Universal Blvd & I 4 WB Off Ramp	26%	10%	64%	21%	11%	69%	100%	0%	0%	99%	1%	0%	75%	16%	9%	68%	16%	15%	-	-	-	-	-	-
3_3	Universal Blvd & Parking Exit	-	-	-	-	-	-	60%	23%	17%	58%	24%	19%	99%	1%	0%	98%	2%	0%	59%	15%	27%	62%	13%	25%
3_4	Universal Blvd & Hollywood Way	14%	39%	47%	13%	35%	52%	32%	6%	62%	38%	5%	56%	20%	13%	67%	16%	13%	71%	5%	16%	79%	17%	16%	67%
3_5	Universal Blvd & Universal Parking	0%	78%	22%	0%	77%	23%	86%	4%	10%	23%	33%	44%	57%	6%	37%	61%	13%	26%	0%	67%	33%	0%	46%	54%
3_6	Universal Blvd & Major Blvd	-	-	-	-	-	-	40%	32%	28%	36%	31%	34%	55%	6%	39%	60%	5%	35%	10%	27%	63%	12%	17%	71%
3_7	Universal Blvd & Loews Portofino Bay Hotel	1%	42%	57%	0%	43%	57%	66%	5%	29%	64%	12%	24%	59%	10%	30%	64%	7%	29%	0%	33%	67%	0%	19%	81%
4_1	Millenia Blvd & Radebaugh Way	31%	7%	62%	44%	8%	48%	0%	31%	69%	2%	20%	79%	4%	33%	63%	4%	30%	66%	20%	12%	69%	35%	13%	52%
4_2	Millenia Blvd & Millenia Lakes Blvd	75%	5%	20%	77%	9%	14%	2%	37%	61%	2%	29%	69%	-	-	-	-	-	-	67%	10%	23%	83%	5%	13%
4_3	Millenia Blvd & Topiary Dr	43%	10%	47%	65%	13%	22%	4%	33%	63%	2%	22%	76%	0%	6%	94%	0%	17%	83%	68%	9%	23%	68%	5%	27%
4_4	Millenia Blvd & Conservatory Ln	41%	13%	46%	36%	12%	53%	2%	34%	64%	1%	20%	79%	3%	20%	78%	1%	20%	78%	27%	14%	59%	32%	14%	54%
5_1	Vineland Rd & Radebaugh Way	-	-	-	-	-	-	40%	11%	50%	42%	12%	46%	28%	10%	62%	40%	9%	52%	11%	33%	56%	20%	22%	58%
5_2	Vineland Rd & Walden Cr	7%	18%	75%	2%	20%	77%	71%	8%	21%	83%	4%	13%	54%	12%	34%	67%	11%	22%	0%	27%	73%	0%	16%	84%
6_1	Apopka Vineland Rd & Bay Side Dr	1%	8%	92%	1%	10%	89%	67%	10%	23%	70%	10%	21%	74%	8%	19%	92%	4%	4%	5%	24%	71%	2%	19%	79%
6_2	Apopka Vineland Rd & Woodbreeze Blvd	2%	9%	90%	4%	19%	77%	79%	4%	17%	53%	9%	38%	86%	4%	10%	84%	3%	13%	1%	19%	80%	7%	23%	70%
6_3	Apopka Vineland Rd & Horizon Cr	1%	25%	74%	1%	22%	77%	66%	9%	25%	84%	5%	11%	69%	7%	24%	75%	8%	16%	0%	8%	92%	0%	14%	86%
6_4	Apopka Vineland Rd & CR 439	8%	13%	78%	13%	12%	75%	17%	11%	72%	31%	14%	55%	30%	11%	59%	25%	10%	65%	7%	9%	84%	17%	16%	67%
6_5	Apopka Vineland Rd & Olympia HS	-	-	-	-	-	-	76%	13%	11%	78%	11%	11%	76%	9%	14%	79%	8%	14%	1%	13%	86%	0%	13%	87%
6_6	Apopka Vineland Rd & Westminster Abbey Blvd	2%	19%	78%	3%	15%	81%	57%	10%	34%	54%	9%	36%	59%	3%	37%	70%	6%	25%	0%	1%	99%	0%	4%	96%
6_7	Apopka Vineland Rd & Westover Roberts Rd	5%	33%	63%	6%	23%	71%	61%	12%	27%	56%	11%	33%	45%	13%	42%	70%	5%	25%	-	-	-	-	-	-
6_8	Apopka Vineland Rd & Steer Lake Rd	8%	10%	82%	5%	6%	89%	47%	10%	42%	31%	10%	59%	29%	10%	61%	71%	4%	25%	10%	11%	78%	9%	10%	80%
7_1	Conroy Windermere Rd & Shopping Center	56%	7%	37%	84%	4%	13%	0%	35%	65%	0%	33%	68%	0%	18%	82%	0%	18%	82%	25%	15%	60%	41%	27%	31%
7_2	Conroy Windermere Rd & Lincoln Ave	62%	5%	33%	47%	19%	34%	0%	36%	64%	0%	42%	58%	16%	16%	69%	19%	21%	60%	77%	7%	16%	70%	9%	21%
7_3	Conroy Windermere Rd & Dr. Phillips Blvd	49%	17%	34%	60%	12%	28%	8%	18%	73%	8%	17%	76%	0%	9%	91%	0%	14%	86%	27%	10%	63%	48%	11%	41%
7_4	Conroy Windermere Rd & CR 439	54%	5%	40%	49%	7%	44%	5%	22%	72%	3%	18%	79%	19%	15%	66%	21%	15%	64%	47%	7%	46%	51%	5%	45%
7_5	Conroy Windermere Rd & Conroy Club Dr	32%	6%	62%	51%	6%	43%	16%	9%	75%	20%	10%	69%	1%	14%	85%	0%	11%	89%	23%	9%	69%	29%	8%	64%
8A_1	Good Homes Rd & SR 408 WB Off Ramp	61%	13%	26%	62%	11%	27%	-	-	-	-	-	-	11%	15%	74%	13%	14%	74%	64%	9%	27%	60%	8%	31%
8A_2	Good Homes Rd & SR 408 EB Ramp	44%	10%	46%	40%	10%	50%	-	-	-	-	-	-	6%	14%	80%	7%	16%	77%	67%	14%	19%	52%	16%	33%
8A_3	Old Winter Garden Rd & Good Homes Rd	15%	13%	72%	14%	19%	67%	-	-	-	-	-	-	-	-	-	-	-	-	23%	13%	64%	17%	23%	60%
8A_4	Good Homes Rd & Apopka Vineland Rd	18%	17%	65%	36%	31%	32%	16%	18%	66%	5%	10%	85%	0%	5%	95%	0%	11%	89%	50%	6%	44%	52%	5%	42%
8A_5	Good Homes Rd & Killington Way	91%	2%	7%	85%	3%	12%	-	-	-	-	-	-	0%	24%	76%	4%	39%	57%	81%	4%	14%	83%	6%	11%

Table 13 Cont.: PM Signal Progression

Int ID	Intersection Name	Percent of Motorists who Continue, Slow Down, and Stop (%)																							
		Eastbound						Northbound						Westbound						Southbound					
		Before			After			Before			After			Before			After			Before			After		
		Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop
8A_6	Good Homes Rd & Steer Lake Rd	80%	9%	11%	71%	12%	17%	7%	11%	82%	5%	17%	78%	4%	0%	96%	6%	11%	83%	72%	6%	22%	82%	5%	13%
8A_7	Good Homes Rd & Dorscher Rd	71%	4%	25%	69%	4%	26%	0%	18%	82%	0%	27%	73%	4%	19%	77%	8%	20%	73%	53%	13%	34%	62%	12%	26%
8A_8	Good Homes Rd & Hiwassee Rd	26%	15%	59%	26%	13%	61%	5%	7%	88%	1%	5%	93%	10%	11%	78%	5%	6%	89%	6%	8%	86%	7%	13%	79%
8A_9	Good Homes Rd & Powers Dr	50%	14%	36%	40%	10%	50%	-	-	-	-	-	-	4%	10%	86%	5%	10%	84%	63%	22%	15%	51%	26%	23%
8B_1	Good Homes Rd & Nome Dr	40%	13%	48%	37%	11%	51%	7%	9%	84%	3%	11%	86%	8%	18%	73%	11%	17%	72%	42%	18%	40%	31%	16%	54%
8B_2	Good Homes Rd & Ivey Ln	27%	23%	50%	61%	19%	20%	22%	17%	61%	14%	14%	72%	-	-	-	-	-	-	62%	17%	21%	63%	15%	22%
8B_3	Good Homes Rd & Mercy Dr	48%	13%	40%	55%	14%	31%	15%	13%	71%	7%	13%	80%	3%	6%	90%	6%	6%	89%	36%	14%	50%	56%	12%	32%
8B_4	Good Homes Rd & SR 408 WB	64%	7%	29%	84%	2%	14%	16%	13%	71%	7%	9%	84%	-	-	-	-	-	-	58%	9%	34%	66%	9%	24%
8B_5	Good Homes Rd & Ferguson Dr	65%	10%	25%	39%	12%	49%	8%	7%	85%	9%	8%	83%	11%	14%	75%	12%	15%	73%	51%	10%	40%	52%	8%	40%
9A_1	Clarcona Ocoee Rd & SR 437	17%	21%	62%	22%	18%	61%	11%	13%	75%	9%	13%	78%	17%	12%	71%	16%	10%	74%	23%	17%	61%	23%	14%	64%
9A_2	Clarcona Ocoee Rd & SR 429 SB On Ramp	57%	27%	16%	54%	18%	28%	-	-	-	-	-	-	7%	17%	76%	6%	14%	80%	52%	23%	25%	46%	18%	36%
9A_3	Clarcona Ocoee Rd & SR 429 NB Off Ramp	77%	11%	12%	82%	9%	9%	64%	7%	28%	65%	6%	29%	100%	0%	0%	0%	0%	0%	38%	19%	43%	82%	4%	14%
9A_4	Clarcona Ocoee Rd & Lakewood Ave	65%	10%	25%	81%	5%	14%	5%	20%	75%	4%	16%	80%	-	-	-	-	-	-	62%	12%	26%	78%	4%	18%
9A_5	Clarcona Ocoee Rd & Adair St	67%	18%	16%	77%	9%	14%	4%	12%	84%	4%	12%	84%	0%	29%	71%	0%	28%	72%	65%	14%	22%	75%	7%	18%
9A_6	Clarcona Ocoee Rd & Clark Rd	47%	18%	35%	35%	15%	50%	4%	6%	90%	3%	7%	90%	15%	17%	69%	13%	6%	81%	66%	7%	27%	66%	8%	25%
9A_7	Clarcona Ocoee Rd & Apopka Vineland Rd	17%	11%	72%	13%	12%	75%	2%	3%	95%	3%	2%	95%	7%	10%	83%	13%	9%	78%	34%	13%	53%	38%	15%	47%
9B_1	Clarcona Ocoee Rd & Beggs Rd	68%	8%	24%	75%	7%	19%	-	-	-	-	-	-	7%	26%	67%	7%	22%	71%	87%	5%	7%	90%	4%	6%
9B_2	Clarcona Ocoee Rd & Hiwassee Rd	23%	10%	67%	27%	12%	61%	9%	11%	80%	8%	8%	84%	14%	10%	76%	2%	4%	94%	16%	12%	72%	20%	11%	69%
9B_3	Clarcona Ocoee Rd & Powers Dr	67%	18%	15%	65%	17%	17%	10%	18%	72%	10%	17%	72%	-	-	-	-	-	-	83%	2%	15%	78%	3%	19%
9B_4	Clarcona Ocoee Rd & Lake Sparling Rd	79%	5%	16%	78%	5%	17%	5%	15%	80%	5%	24%	70%	5%	11%	83%	6%	9%	85%	80%	11%	10%	84%	7%	10%
9B_5	Clarcona Ocoee Rd & Pine Hills Rd	21%	22%	57%	22%	18%	60%	21%	17%	62%	18%	16%	66%	14%	16%	70%	14%	17%	68%	21%	6%	73%	21%	9%	70%
9B_6	Clarcona Ocoee Rd & Rose Ave	85%	6%	9%	81%	6%	13%	5%	14%	81%	0%	24%	76%	6%	17%	77%	7%	16%	76%	79%	8%	13%	77%	7%	16%
10A_1	Beggs Rd & Overland Rd	62%	8%	31%	51%	9%	40%	-	-	-	-	-	-	8%	17%	75%	6%	20%	74%	54%	23%	22%	45%	29%	26%
10A_2	Beggs Rd & Pine Hills Rd	34%	25%	42%	38%	29%	33%	14%	26%	60%	17%	32%	51%	-	-	-	-	-	-	37%	8%	55%	42%	9%	48%
10A_3	Beggs Rd & Rose Ave	30%	24%	46%	21%	19%	59%	8%	5%	86%	8%	16%	76%	9%	26%	65%	10%	22%	68%	59%	12%	29%	44%	14%	42%
10A_4	Beggs Rd & Mott Rd	58%	15%	27%	57%	19%	24%	5%	43%	52%	10%	34%	57%	2%	14%	84%	7%	16%	77%	56%	24%	20%	55%	22%	23%
10B_1	Beggs Rd & Magnolia Holmes Rd	50%	11%	38%	52%	8%	40%	9%	8%	83%	9%	10%	81%	10%	8%	82%	13%	10%	77%	32%	24%	44%	52%	16%	32%
10B_2	Beggs Rd & Clarcona Ocoee Rd	47%	8%	45%	39%	6%	55%	28%	35%	36%	27%	34%	39%	-	-	-	-	-	-	54%	10%	36%	61%	6%	33%
10B_3	Beggs Rd & All American Blvd	35%	7%	58%	39%	8%	54%	18%	17%	66%	13%	23%	65%	6%	12%	82%	2%	8%	91%	32%	10%	58%	49%	10%	42%
11_1	John Young Parkway & 35th St	5%	5%	90%	0%	9%	91%	37%	9%	54%	25%	9%	66%	77%	3%	20%	71%	5%	24%	5%	27%	68%	7%	24%	68%
11_2	John Young Parkway & I 4 EB Ramp	24%	11%	65%	27%	10%	63%	53%	14%	34%	57%	14%	29%	61%	8%	31%	46%	14%	39%	-	-	-	-	-	-
11_4	John Young Parkway & L.B. Mc Leod Rd	14%	8%	78%	9%	6%	85%	41%	15%	44%	43%	14%	43%	33%	20%	47%	33%	21%	46%	17%	4%	79%	7%	6%	87%
11_5	John Young Parkway & Clear Way	-	-	-	-	-	-	82%	7%	11%	89%	6%	6%	25%	19%	56%	28%	22%	50%	1%	23%	76%	0%	25%	75%
11_6	John Young Parkway & Ramp To John Young Pkwy	60%	15%	25%	73%	9%	18%	99%	0%	1%	99%	1%	0%	51%	15%	35%	65%	7%	28%	-	-	-	-	-	-
11_7	John Young Parkway & Shopping Center Drway	4%	19%	76%	0%	14%	86%	93%	0%	7%	74%	12%	14%	70%	8%	21%	87%	3%	10%	0%	0%	100%	0%	0%	100%
11_8	John Young Parkway & Raleigh St	23%	17%	60%	22%	17%	61%	51%	5%	44%	78%	1%	21%	16%	12%	72%	44%	17%	40%	-	-	-	-	-	-
11_9	John Young Parkway & Monte Carlo Trail	3%	36%	61%	23%	23%	54%	70%	11%	19%	73%	10%	17%	92%	1%	7%	90%	2%	8%	-	-	-	-	-	-
11_10	John Young Parkway & Orange Center Blvd	12%	10%	78%	14%	10%	76%	61%	13%	26%	64%	10%	26%	67%	3%	30%	83%	2%	15%	13%	10%	77%	9%	7%	84%
11_11	John Young Parkway & C R Smith St	7%	43%	49%	16%	22%	62%	82%	7%	11%	90%	4%	6%	60%	10%	30%	89%	6%	6%	-	-	-	-	-	-
12_1	SR 426 & Old Howell Branch Rd	56%	19%	25%	65%	12%	24%	-	-	-	-	-	-	17%	28%	54%	13%	16%	70%	91%	5%	5%	87%	4%	9%

Table 13 Cont.: PM Signal Progression

Int ID	Intersection Name	Percent of Motorists who Continue, Slow Down, and Stop (%)																							
		Eastbound						Northbound						Westbound						Southbound					
		Before			After			Before			After			Before			After			Before			After		
		Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop
12_2	SR 426 & Hall Rd	38%	10%	51%	39%	8%	53%	17%	7%	76%	10%	13%	77%	11%	6%	83%	4%	10%	85%	25%	15%	60%	28%	9%	64%
12_3	SR 426 & Trinity Prep Ln	96%	2%	2%	91%	2%	7%	0%	0%	100	0%	29%	71%	-	-	-	-	-	-	85%	6%	9%	80%	10%	10%
12_4	SR 426 & S Tuskawilla Rd	20%	8%	71%	23%	10%	67%	0%	13%	87%	0%	22%	78%	9%	19%	72%	16%	12%	72%	41%	31%	29%	46%	28%	25%
12_5	SR 426 & Clayton Crossing Way	49%	15%	37%	47%	15%	38%	6%	17%	77%	5%	13%	81%	6%	13%	82%	1%	18%	81%	37%	13%	49%	35%	12%	53%
12_6	SR 426 & SR 417 SB On Ramp	93%	4%	4%	92%	3%	4%	-	-	-	-	-	-	91%	1%	8%	85%	1%	14%	84%	11%	5%	79%	16%	5%
12_7	SR 426 & Seminole Expressway NB Ramp	73%	9%	18%	69%	9%	22%	27%	9%	64%	23%	12%	64%	-	-	-	-	-	-	52%	16%	32%	55%	13%	33%
12_8	SR 426 & Dean Rd	58%	12%	30%	56%	16%	28%	14%	24%	62%	10%	17%	73%	0%	40%	60%	0%	33%	67%	36%	5%	60%	45%	5%	50%
13_1	SR 434 & Manor Ave	66%	10%	23%	68%	9%	23%	0%	40%	60%	0%	50%	50%	3%	30%	67%	0%	44%	56%	72%	20%	9%	60%	26%	14%
13_2	SR 434 & Montgomery Rd	29%	13%	59%	39%	11%	50%	4%	10%	86%	12%	20%	68%	12%	12%	76%	9%	12%	79%	46%	26%	28%	42%	23%	35%
13_3	SR 434 & Springs Blvd	85%	4%	10%	91%	0%	9%	0%	33%	67%	0%	0%	0%	3%	27%	70%	0%	43%	57%	82%	9%	10%	81%	4%	15%
13_4	SR 434 & Spring Centre Blvd	95%	1%	4%	96%	1%	3%	0%	11%	89%	0%	0%	100	-	-	-	-	-	-	87%	5%	8%	96%	0%	4%
13_5	SR 434 & Douglas Ave	31%	7%	62%	23%	10%	68%	9%	9%	82%	0%	13%	88%	13%	17%	69%	7%	18%	75%	29%	18%	53%	32%	24%	45%
13_6	SR 434 & I-4 Ramps	86%	10%	4%	86%	13%	1%	-	-	-	-	-	-	18%	22%	60%	17%	19%	64%	81%	14%	5%	85%	8%	7%
13_7	SR 434 & I-4 Ramps	41%	5%	54%	38%	9%	54%	84%	4%	12%	83%	2%	15%	-	-	-	-	-	-	70%	12%	18%	57%	18%	25%
13_8	SR 434 & Raymond Ave	71%	11%	19%	71%	16%	12%	4%	15%	81%	0%	0%	100	0%	24%	76%	0%	29%	71%	40%	17%	43%	27%	8%	65%
13_9	SR 434 & Roxboro Rd	94%	3%	3%	93%	3%	3%	0%	0%	100	0%	50%	50%	5%	5%	91%	0%	100%	0%	94%	4%	3%	76%	11%	13%
13_10	SR 434 & Tollgate Trl	94%	0%	5%	79%	5%	16%	-	-	-	-	-	-	0%	20%	80%	0%	0%	100	81%	5%	14%	87%	9%	4%
13_11	SR 434 & Palm Spings Rd	26%	9%	65%	63%	9%	28%	3%	28%	69%	0%	36%	64%	0%	10%	90%	0%	0%	0%	75%	5%	20%	78%	2%	20%
13_12	SR 434 & Range Line Rd	68%	6%	26%	31%	20%	49%	3%	16%	81%	0%	67%	33%	6%	24%	70%	9%	45%	45%	42%	20%	37%	52%	16%	32%
13_13	SR 434 & Florida Central Pkwy	60%	19%	21%	75%	18%	7%	3%	23%	74%	0%	0%	0%	0%	29%	71%	0%	0%	0%	74%	8%	18%	80%	12%	8%
13_14	SR 434 & CR 427	39%	20%	41%	46%	19%	35%	16%	10%	74%	18%	7%	75%	13%	16%	72%	4%	29%	68%	16%	16%	68%	28%	0%	72%
13_15	SR 434 & S Grant St	59%	17%	24%	46%	11%	43%	9%	30%	61%	0%	100	0%	9%	9%	82%	20%	0%	80%	67%	10%	22%	74%	3%	23%
13_16	SR 434 & S Wayman St	87%	4%	9%	91%	3%	6%	-	-	-	-	-	-	6%	39%	55%	0%	0%	100	80%	11%	9%	70%	15%	15%
14_1	US 17/92 & Orange Blvd	10%	23%	67%	13%	33%	54%	54%	13%	33%	51%	8%	41%	39%	19%	42%	42%	13%	45%	100	0%	0%	0%	100	0%
14_2	US 17/92 & Orange Blvd	-	-	-	-	-	-	25%	18%	57%	11%	8%	80%	78%	8%	14%	70%	7%	22%	79%	6%	15%	72%	13%	16%
14_3	US 17/92 & SR 15 To I 4	89%	5%	6%	90%	6%	4%	76%	7%	17%	71%	9%	20%	56%	21%	23%	54%	22%	24%	0%	17%	83%	0%	20%	80%
15_1	SR 436 & Sand Lake Rd	71%	5%	24%	72%	4%	24%	-	-	-	-	-	-	12%	12%	76%	2%	25%	73%	91%	3%	6%	87%	2%	11%
15_2	SR 436 & Balmy Beach Dr	51%	11%	39%	50%	9%	41%	8%	15%	77%	2%	14%	84%	0%	18%	82%	0%	14%	86%	75%	4%	21%	68%	7%	25%
15_3	SR 436 & Hunt Club Blvd	72%	4%	24%	77%	4%	19%	0%	29%	71%	0%	8%	92%	12%	16%	72%	6%	13%	81%	30%	19%	51%	55%	14%	31%
15_4	SR 436 & Bear Lake Rd	48%	13%	38%	45%	15%	41%	12%	15%	73%	10%	18%	72%	-	-	-	-	-	-	85%	5%	11%	87%	1%	12%
15_5	SR 436 & Harley Lester Ln	98%	2%	0%	98%	2%	0%	0%	0%	100	0%	8%	92%	0%	100	0%	0%	33%	67%	97%	2%	2%	98%	1%	1%
15_6	SR 436 & Campus Loop	83%	2%	15%	91%	4%	5%	0%	7%	93%	0%	0%	100	0%	17%	83%	0%	0%	0%	89%	4%	7%	94%	1%	6%
15_7	SR 436 & Academy Dr	54%	17%	29%	86%	2%	12%	0%	33%	67%	0%	29%	71%	4%	20%	76%	8%	17%	75%	81%	7%	12%	56%	14%	30%
15_8	SR 436 & McNeil Rd	71%	4%	25%	50%	19%	31%	8%	20%	71%	12%	10%	78%	20%	0%	80%	0%	14%	86%	86%	4%	10%	86%	3%	11%
15_9	SR 436 & Maple St	90%	0%	10%	92%	2%	6%	0%	27%	73%	0%	33%	67%	0%	13%	87%	0%	25%	75%	72%	8%	20%	75%	10%	15%
15_10	SR 436 & SR 434	33%	14%	52%	29%	20%	51%	29%	17%	54%	31%	19%	50%	32%	15%	53%	25%	11%	64%	18%	13%	69%	35%	10%	55%
15_11	SR 436 & Laurel St	68%	3%	29%	61%	1%	38%	6%	29%	65%	5%	46%	49%	0%	29%	71%	5%	21%	74%	47%	5%	48%	41%	6%	52%
16_1	SR 434 & 414 Ramps	24%	33%	43%	23%	33%	44%	58%	6%	36%	52%	4%	44%	62%	24%	13%	60%	25%	16%	-	-	-	-	-	-
16_2	SR 434 & 414 Ramps	-	-	-	-	-	-	94%	6%	0%	93%	7%	0%	57%	9%	34%	56%	7%	37%	30%	38%	32%	26%	46%	29%
16_3	SR 434 & Gateway Dr	14%	19%	68%	15%	17%	69%	46%	11%	43%	44%	8%	48%	55%	5%	40%	64%	3%	33%	8%	16%	76%	7%	14%	79%

Table 13 Cont.: PM Signal Progression

Int ID	Intersection Name	Percent of Motorists who Continue, Slow Down, and Stop (%)																							
		Eastbound						Northbound						Westbound						Southbound					
		Before			After			Before			After			Before			After			Before			After		
		Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop
16_4	SR 434 & Lotus Landing Blvd	0%	7%	93%	7%	21%	71%	84%	5%	11%	89%	3%	8%	68%	11%	21%	78%	7%	14%	6%	22%	72%	10%	17%	72%
16_5	SR 434 & Bunnell Rd	12%	8%	80%	13%	16%	70%	33%	16%	51%	29%	16%	54%	32%	27%	42%	34%	20%	46%	6%	10%	84%	5%	17%	78%
16_6	SR 434 & Orange Ave	0%	17%	83%	0%	15%	85%	39%	19%	42%	59%	15%	26%	41%	10%	48%	47%	12%	41%	3%	14%	83%	6%	15%	79%
16_7	SR 434 & SR436	31%	17%	52%	25%	24%	51%	29%	17%	54%	30%	18%	53%	31%	15%	53%	25%	13%	62%	19%	13%	68%	35%	10%	55%
16_8	SR 434 & Cape Cod Ln	0%	30%	70%	0%	22%	78%	83%	8%	8%	83%	8%	9%	89%	7%	4%	87%	8%	5%	0%	21%	79%	0%	47%	53%
16_9	SR 434 & Sand Lake Rd	8%	19%	73%	5%	22%	73%	77%	6%	18%	79%	2%	19%	60%	18%	23%	64%	20%	16%	0%	33%	67%	0%	0%	100%
16_10	SR 434 & Jamestown Blvd	0%	17%	83%	0%	23%	77%	56%	16%	28%	56%	17%	27%	49%	11%	40%	51%	16%	33%	10%	23%	67%	3%	20%	77%
16_11	SR 434 & E Lake Brantley Dr	4%	35%	61%	3%	30%	67%	57%	13%	29%	52%	12%	36%	68%	8%	24%	65%	6%	29%	0%	38%	62%	0%	20%	80%
17_1W	Sand Lake Rd & Oak Haven Dr	59%	12%	29%	60%	11%	29%	0%	38%	63%	0%	40%	60%	6%	16%	79%	7%	21%	73%	60%	20%	21%	68%	15%	17%
17_2W	Sand Lake Rd & Hickory Dr	55%	14%	31%	63%	12%	25%	10%	18%	73%	7%	16%	77%	0%	0%	100	0%	13%	87%	67%	12%	22%	72%	11%	17%
17_3A	Sand Lake Rd & Lake Brantley High School Drway	52%	15%	32%	60%	11%	29%	1%	39%	60%	6%	35%	58%	1%	30%	69%	4%	36%	60%	62%	11%	27%	73%	11%	16%
17_4W	Sand Lake Rd & Lake Brantley High Back Entrance	79%	8%	12%	82%	8%	11%	-	-	-	-	-	-	0%	23%	77%	0%	12%	88%	86%	9%	6%	82%	9%	8%
17_1W	Sand Lake Rd & Oak Haven Dr	57%	17%	25%	55%	11%	33%	0%	0%	100	0%	0%	0%	5%	10%	85%	11%	19%	70%	51%	25%	24%	60%	16%	24%
17_2W	Sand Lake Rd & Lake Brantley High School Drway	66%	12%	22%	57%	17%	26%	13%	4%	83%	3%	20%	77%	0%	0%	100	0%	0%	0%	62%	13%	25%	70%	13%	17%
17_3A	Sand Lake Rd & Lake Brantley High School Drway	80%	14%	6%	82%	14%	4%	0%	50%	50%	0%	20%	80%	0%	75%	25%	0%	25%	75%	87%	5%	8%	91%	5%	4%
17_4W	Sand Lake Rd & Lake Brantley High Back Entrance	95%	2%	3%	95%	3%	2%	-	-	-	-	-	-	0%	0%	100	0%	100%	0%	90%	7%	3%	95%	2%	2%
18_1	US 192 & SR 91 NB Off Ramp	32%	6%	63%	84%	2%	14%	18%	10%	72%	15%	13%	72%	3%	15%	82%	4%	16%	80%	37%	8%	55%	72%	7%	20%
18_2	US 192 & Commerce center Dr	46%	8%	46%	17%	15%	68%	8%	24%	69%	7%	29%	65%	9%	22%	69%	7%	21%	72%	37%	16%	47%	17%	16%	67%
18_3	US 192 & Old Canoe Creek Rd	62%	8%	30%	62%	11%	27%	8%	19%	73%	9%	20%	71%	6%	18%	75%	7%	17%	75%	46%	10%	43%	51%	13%	36%
18_4	US 192 & Brown Chapel Rd	74%	9%	17%	67%	8%	24%	5%	24%	70%	6%	29%	64%	6%	15%	79%	10%	15%	75%	46%	8%	46%	45%	9%	46%
18_5	US 192 & Big Lots	82%	3%	14%	84%	3%	13%	0%	24%	76%	1%	26%	73%	-	-	-	-	-	-	71%	4%	25%	69%	6%	25%
18_6	US 192 & Budinger Ave	52%	10%	38%	36%	12%	52%	7%	14%	80%	8%	14%	78%	5%	8%	87%	4%	10%	86%	55%	12%	34%	66%	9%	25%
18_7	US 192 & Tennessee Ave	63%	15%	22%	73%	14%	13%	1%	36%	63%	3%	36%	61%	1%	22%	77%	6%	22%	72%	53%	10%	37%	80%	7%	13%
18_8	US 192 & CR 523	35%	11%	54%	36%	14%	50%	10%	16%	73%	16%	18%	66%	3%	6%	91%	6%	9%	86%	46%	8%	46%	36%	15%	49%
18_9	US 192 & New York Ave	78%	7%	15%	69%	15%	17%	0%	6%	94%	4%	9%	87%	0%	19%	81%	0%	18%	82%	51%	15%	34%	78%	11%	10%
18_10	US 192 & Creek Woods Dr	59%	10%	31%	80%	7%	13%	4%	23%	73%	6%	16%	77%	6%	10%	85%	6%	11%	83%	61%	11%	28%	77%	6%	17%
18_11	US 192 & Delaware Ave	87%	3%	10%	90%	3%	7%	3%	14%	83%	2%	11%	88%	2%	12%	86%	6%	15%	79%	62%	17%	21%	61%	17%	22%
18_12	US 192 & CR 534	44%	14%	42%	65%	9%	26%	11%	21%	68%	10%	17%	73%	12%	30%	58%	11%	34%	56%	47%	9%	43%	50%	7%	43%
19_1	CR 532 & Masters Blvd	42%	8%	50%	51%	5%	44%	-	-	-	-	-	-	6%	16%	78%	6%	16%	78%	28%	21%	51%	40%	18%	42%
19_2	CR 532 & Calder Blvd	24%	21%	55%	28%	18%	53%	0%	12%	88%	1%	11%	88%	10%	22%	68%	8%	18%	74%	25%	16%	59%	40%	14%	45%
19_3	CR 532 & I 4 WB Off Ramp	7%	21%	72%	10%	22%	69%	-	-	-	-	-	-	26%	25%	50%	49%	15%	35%	77%	12%	11%	82%	13%	5%
19_4	CR 532 & CR 532 To I-4	67%	24%	8%	67%	28%	5%	68%	2%	30%	74%	2%	24%	-	-	-	-	-	-	11%	11%	78%	14%	16%	69%
19_5	CR 532 & Heritage Pass	56%	16%	28%	67%	12%	21%	12%	84%	4%	13%	81%	6%	0%	67%	33%	0%	0%	100	63%	10%	27%	70%	5%	25%
19_6	CR 532 & Legacy Village Dr	98%	1%	0%	99%	0%	1%	0%	50%	50%	0%	62%	38%	0%	50%	50%	0%	50%	50%	97%	2%	1%	97%	2%	1%
19_7	CR 532 & Reunion Blvd	76%	11%	13%	79%	10%	12%	0%	37%	63%	0%	27%	73%	1%	20%	79%	3%	29%	68%	74%	10%	16%	74%	6%	20%
19_8	CR 532 & Old lake Wilson Rd	9%	20%	71%	9%	21%	71%	46%	34%	19%	37%	42%	21%	2%	5%	94%	1%	3%	97%	15%	15%	70%	9%	15%	76%
20_1	Good Homes Rd & Balboa Dr	-	-	-	-	-	-	52%	18%	30%	40%	21%	39%	55%	13%	32%	50%	11%	39%	5%	10%	85%	4%	12%	84%
20_2	Good Homes Rd & E Orolando Ave	4%	20%	76%	6%	20%	74%	41%	23%	35%	49%	23%	28%	41%	14%	45%	38%	14%	48%	8%	10%	82%	5%	10%	85%
21_1	Pine Hills Rd & Balboa Dr	8%	21%	71%	7%	16%	77%	50%	14%	37%	49%	15%	35%	41%	8%	52%	44%	16%	40%	5%	17%	78%	4%	19%	77%
21_2	Pine Hills Rd & Dolores Dr	0%	0%	0%	0%	0%	100	86%	8%	6%	84%	6%	10%	87%	6%	7%	79%	7%	14%	0%	17%	83%	4%	36%	60%

Table 13 Cont.: PM Signal Progression

Int ID	Intersection Name	Percent of Motorists who Continue, Slow Down, and Stop (%)																							
		Eastbound						Northbound						Westbound						Southbound					
		Before			After			Before			After			Before			After			Before			After		
		Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop	Cont.	Slow	Stop
21_3	Pine Hills Rd & Hernandes Dr	4%	4%	92%	0%	0%	100	68%	14%	17%	56%	13%	30%	67%	16%	16%	75%	11%	14%	6%	37%	57%	12%	28%	60%
21_4	Pine Hills Rd & Indialantic Dr	8%	21%	71%	2%	24%	74%	25%	9%	67%	56%	13%	31%	27%	12%	60%	54%	8%	38%	2%	30%	68%	1%	19%	80%
21_5	Pine Hills Rd & SR 438	10%	11%	79%	5%	8%	87%	2%	7%	91%	6%	8%	86%	6%	11%	83%	12%	10%	78%	3%	6%	91%	1%	2%	98%
21_6	Pine Hills Rd & Belco Dr	6%	29%	65%	4%	28%	68%	45%	13%	43%	67%	11%	22%	36%	14%	50%	39%	11%	50%	0%	100	0%	0%	50%	50%
21_7	Pine Hills Rd & Londonderry Blvd	-	-	-	-	-	-	63%	13%	23%	73%	11%	16%	39%	9%	51%	72%	9%	19%	5%	24%	72%	1%	29%	70%
21_8	Pine Hills Rd & Indian Hills Rd	12%	24%	64%	5%	19%	76%	84%	3%	13%	65%	12%	22%	46%	11%	43%	50%	11%	38%	-	-	-	-	-	-
21_9	Pine Hills Rd & North Lane	16%	12%	72%	6%	12%	82%	8%	9%	83%	11%	13%	76%	21%	13%	66%	22%	11%	68%	14%	24%	62%	14%	21%	65%
22_1	Maitland Ave & E Horatio Ave	10%	28%	62%	0%	10%	90%	20%	10%	70%	30%	8%	62%	22%	12%	66%	27%	19%	55%	8%	27%	65%	8%	15%	77%
22_2	Maitland Ave & Sandspur Rd	2%	17%	82%	0%	15%	85%	55%	13%	32%	55%	10%	35%	33%	13%	54%	43%	16%	41%	-	-	-	-	-	-
22_3	Maitland Ave & Marion Way	0%	17%	83%	0%	16%	84%	45%	11%	44%	26%	8%	66%	74%	7%	19%	70%	8%	22%	1%	23%	77%	0%	20%	80%
22_4	Maitland Ave & SR 414	24%	13%	64%	19%	8%	72%	7%	8%	85%	6%	14%	80%	14%	12%	74%	16%	16%	68%	23%	7%	70%	27%	7%	66%
23_1	Hiawasse Rd & Edgewater Dr	9%	16%	75%	11%	19%	70%	35%	6%	59%	46%	8%	46%	59%	7%	35%	34%	7%	59%	7%	6%	87%	7%	5%	88%
23_2	Hiawasse Rd & Walmart	3%	18%	79%	3%	12%	85%	52%	12%	36%	42%	14%	44%	32%	22%	47%	63%	16%	21%	1%	23%	77%	2%	21%	77%
24_1	Hiawasse Rd & SR 408 EB	44%	15%	42%	49%	13%	38%	32%	9%	58%	49%	12%	39%	63%	4%	33%	63%	3%	34%	-	-	-	-	-	-
24_2	Hiawasse Rd & SR 408 WB	-	-	-	-	-	-	68%	11%	21%	66%	9%	25%	58%	13%	29%	56%	8%	36%	16%	22%	61%	25%	17%	58%
24_3	Hiawasse Rd & W Colonial Dr	18%	15%	67%	13%	15%	72%	6%	4%	90%	12%	12%	76%	18%	10%	72%	27%	14%	59%	38%	16%	46%	22%	16%	62%
24_4	Hiawasse Rd & Orange County MultiCultural Center	2%	8%	90%	2%	11%	87%	73%	18%	9%	75%	15%	10%	87%	8%	4%	79%	7%	14%	-	-	-	-	-	-
24_5	Hiawasse Rd & Vernon St	13%	10%	76%	8%	8%	84%	61%	7%	32%	44%	7%	49%	37%	10%	53%	28%	9%	62%	2%	9%	89%	4%	11%	85%
24_6	Hiawasse Rd & Hennepin Blvd	0%	17%	83%	0%	15%	85%	72%	8%	20%	79%	10%	10%	79%	11%	9%	74%	10%	17%	11%	14%	75%	15%	20%	66%
24_7	Hiawasse Rd & SR438	13%	10%	77%	12%	10%	78%	3%	4%	93%	4%	4%	92%	9%	17%	74%	13%	11%	76%	5%	11%	85%	6%	13%	81%
24_8	Hiawasse Rd & Super Beauty Depot	0%	40%	60%	0%	38%	62%	37%	28%	35%	67%	18%	15%	43%	15%	42%	38%	14%	48%	1%	37%	62%	0%	31%	69%
24_9	Hiawasse Rd & Coral Cove Dr	5%	16%	79%	2%	15%	83%	54%	16%	29%	67%	12%	21%	52%	10%	38%	70%	6%	24%	3%	21%	76%	3%	21%	76%
24_10	Hiawasse Rd & Hiawasse Oak Dr	0%	10%	90%	0%	17%	83%	85%	4%	11%	82%	5%	13%	80%	13%	7%	53%	18%	29%	-	-	-	-	-	-
24_11	Hiawasse Rd & Clarcona Ocoee Rd	23%	9%	67%	28%	12%	60%	9%	11%	80%	8%	8%	84%	14%	11%	75%	2%	3%	94%	12%	10%	77%	17%	9%	73%
24_12	Hiawasse Rd & Beggs Rd	8%	5%	87%	9%	4%	88%	56%	13%	31%	62%	6%	32%	66%	8%	26%	37%	12%	51%	12%	10%	79%	6%	8%	87%
24_13	Hiawasse Rd & SR 414 EB Ramp	53%	26%	21%	58%	22%	19%	54%	17%	28%	46%	15%	39%	91%	9%	0%	87%	12%	1%	-	-	-	-	-	-
24_14	Hiawasse Rd & SR 414 WB Ramp	-	-	-	-	-	-	95%	5%	0%	95%	5%	0%	89%	3%	9%	73%	6%	21%	53%	27%	20%	67%	21%	12%
24_15	Hiawasse Rd & Wekiva High School	-	-	-	-	-	-	87%	4%	9%	86%	6%	8%	90%	4%	7%	86%	4%	11%	0%	8%	92%	0%	22%	78%
25_1	Park Ave & E 5th St	3%	15%	82%	6%	17%	77%	33%	34%	34%	32%	35%	33%	27%	37%	35%	41%	32%	28%	4%	17%	79%	4%	24%	72%
25_2	Park Ave & SR 500	8%	11%	81%	19%	23%	59%	10%	11%	79%	7%	11%	81%	10%	15%	74%	7%	13%	80%	1%	6%	93%	4%	7%	89%
26_1	Vick Rd & SR 500	29%	6%	65%	36%	2%	62%	13%	10%	77%	9%	11%	80%	6%	11%	83%	11%	8%	80%	18%	9%	73%	41%	8%	51%
26_2	Vick Rd & Edgewater Dr	11%	9%	80%	11%	10%	79%	65%	12%	23%	62%	11%	27%	40%	13%	48%	39%	13%	48%	7%	18%	75%	6%	21%	72%

*Data collected on Saturday and Sunday are presented in the AM and PM columns, respectively

Table 14: Average Number of Stops and Slow Downs

Corrid or No.	Road	Average Number of Stops and Slow Downs by End-to-End Traveler (#)															
		AM Peak Period								PM Peak Period							
		Northbound/Eastbound				Southbound/Westbound				Northbound/Eastbound				Southbound/Westbound			
		Before		After		Before		After		Before		After		Before		After	
Stop	Slow	Stop	Slow	Stop	Slow	Stop	Slow	Stop	Slow	Stop	Slow	Stop	Slow	Stop	Slow	Stop	Slow
1	Hiawassee Road	1.3	1.6	1.6	2.0	1.5	1.7	1.5	1.8	1.8	2.2	2.3	2.8	1.6	2.1	1.3	1.7
2	Metrowest Boulevard	0.9	1.1	0.8	1.0	0.9	1.2	0.7	1.0	1.2	1.5	0.8	1.2	0.8	1.2	0.9	1.4
3	Universal Boulevard	2.6	3.1	3.4	4.0	2.0	2.5	2.4	3.1	2.2	2.7	1.9	2.8	2.7	3.3	2.5	3.6
4	Millenia Blvd	1.7	2.0	1.7	2.1	1.2	1.5	1.0	1.3	2.1	2.5	1.8	2.1	1.8	2.1	1.2	1.5
5	Vineland Road	0.7	0.8	0.5	0.6	0.8	1.1	0.6	0.7	0.9	1.0	0.7	0.8	0.8	1.1	0.6	0.8
6	Apopka Vineland Road	1.7	2.1	1.3	1.5	2.4	2.9	2.0	2.3	2.3	2.8	2.0	2.6	2.1	2.6	1.5	1.8
7	Conroy Windermere Road	0.7	1.0	0.9	1.4	2.8	3.2	1.7	2.4	1.8	2.2	1.2	1.8	3.7	4.2	2.3	3.2
8 ¹	Good Homes Road/Old Winter Garden Road	6.1	7.7	5.3	6.9	3.3	4.8	3.5	6.5	4.7	6.2	4.9	6.1	3.9	5.7	4.3	5.8
8A	SR 408 WB Ramps to Kirkman Road	4.9	5.7	4	4.7	2.2	3.1	2.4	4.6	3	4	3.5	4.3	2.5	3.8	3.1	4.2
8B	Kirkman Road to Ferguson Drive	1.2	2	1.3	2.2	1.1	1.7	1.1	1.9	1.7	2.2	1.4	1.8	1.4	1.9	1.2	1.6
9 ¹	West Road/Clarcona Ocoee Road	4.2	5.3	3.8	5.2	3.8	4.9	3.7	4.8	3.6	5	3.2	3.8	3.8	5.1	3.1	4
9A	SR 408 WB Ramps to Kirkman Road	2.8	3.5	1.9	2.7	2.4	3.2	2.2	2.9	2.4	3.4	2.1	2.3	1.9	2.8	1.3	1.9
9B	Kirkman Road to Ferguson Drive	1.4	1.8	1.9	2.5	1.4	1.7	1.5	1.9	1.2	1.6	1.1	1.5	1.9	2.3	1.8	2.1
10 ¹	Beggs Road/Edgewater Drive	2.9	4.1	2.6	3.9	2.2	3.2	1.5	2.1	2.7	3.7	2.8	3.8	2.3	3.4	2.3	3.3
10A	Overland Road to Mott Avenue	1.2	1.8	1.3	2.1	1.5	2.3	1.2	1.6	1.3	1.8	1.3	1.9	1.2	1.7	1.6	2.2
10B	Mott Avenue to All American Boulevard	1.7	2.3	1.3	1.8	0.7	0.9	0.3	0.5	1.4	1.9	1.5	1.9	1.1	1.7	0.7	1.1
11	John Young Parkway	2.9	3.6	1.1	1.4	2.7	2.9	0.6	1.0	2.3	3.0	1.5	2.2	3.7	3.6	2.6	2.6
12 ²	SR 426	2.0	2.3	2.2	2.4	1.9	2.6	1.9	2.6	1.9	2.1	1.7	1.9	1.5	2.3	1.6	2.0
13 ²	SR 434	2.0	3.0	2.9	3.6	2.3	3.3	2.5	3.8	1.8	2.4	2.4	2.7	2.0	3.1	2.8	3.6
14 ²	US17/92	1.4	1.8	1.0	1.4	2.0	2.1	0.8	1.1	1.0	1.5	1.4	1.9	0.7	1.0	0.9	1.3
15 ²	SR 436	2.8	3.6	2.2	3.1	2.4	2.8	2.1	2.7	2.1	2.9	1.9	2.7	1.8	2.2	1.5	1.7
16 ²	SR 434	1.8	2.5	2.1	2.9	3.4	4.1	2.9	3.4	3.0	3.6	2.1	2.8	3.5	3.9	2.7	2.8
17 ³	Sand Lake Road (Weekday)	1.8	2.7	2.0	2.8	1.1	1.8	1.0	1.6	1.5	2.0	1.3	1.8	0.8	1.3	0.6	1.0
	Sand Lake Road (Weekend)	1.1	1.7	0.9	1.4	0.9	1.3	0.6	1.0	0.6	1.1	0.9	1.3	0.7	1.1	0.5	0.7
18	US 192	3.8	4.4	1.5	1.9	2.8	3.8	2.3	3.2	3.4	3.9	2.7	3.5	4.2	5.0	2.8	3.9
19	CR 532	2.3	3.2	3.6	3.8	2.8	3.5	2.8	3.4	3.4	4.4	3.0	3.8	3.6	4.3	2.4	3.1
20	Good Homes Road	0.5	0.8	0.6	0.9	0.5	0.9	0.5	0.9	0.5	0.9	0.5	0.9	0.8	1.2	1.0	1.4
21	Pine Hills Road	3.7	4.5	3.1	3.9	3.3	4.0	3.2	4.0	5.7	5.5	3.6	4.3	4.7	5.4	3.8	4.6
22	Maitland Avenue	2.0	2.4	1.6	1.9	2.6	3.2	1.7	2.3	2.4	2.6	2.9	2.7	2.1	2.6	1.9	2.4
23	Hiawassee Road (Apopka)	1.1	1.3	0.8	1.0	0.7	0.8	0.3	0.3	1.4	1.6	1.3	1.6	0.8	1.0	0.8	0.9
24	Hiawassee Road (Orange)	3.6	5.4	4.4	6.0	4.1	6.3	4.3	7.2	6.5	7.0	5.8	6.5	4.7	5.3	5.8	6.6
25	Park Avenue	1.1	1.3	1.2	1.3	1.4	1.9	1.4	1.8	1.3	1.6	1.2	1.5	1.6	2.2	1.6	2.1
26	Vick Road	0.9	1.3	1.1	1.5	1.3	1.5	1.4	1.6	1.0	1.0	1.0	1.1	1.4	1.4	1.4	1.4

¹Corridor was split into multiple parts for analysis based on corridor goals. ²Retimed only for the weekend. ³Retimed for the weekday and weekend.

*Data collected on Saturday and Sunday are presented in the AM and PM columns, respectively

Travelled Speed

The average speed vehicles traveled along the corridor before and after the retiming was also considered. Signal retiming may smooth the speeds along the corridor allowing vehicles to travel at a consistent speed, rather than speeding up and slowing down repeatedly. Travelled speed is also an effective metric to measure the effectiveness of a retiming implementation that seeks to increase compliance with the posted speed. Additionally, understanding the speed distribution along a corridor can help identify segments with high rates of speeding, which may create unsafe conditions along the corridor.

Table 15 shows the percentage of vehicles exceeding and following the speed limit before and after the retiming. The maximum recorded speed over the posted speed limit for the AM peak period and PM peak period is shown in **Table 16** and **Table 17**, respectively.

The corridor retiming projects resulted in reducing the percentage of people speeding along a corridor for 12 of 21 corridors (57%) during the AM peak period and 6 of 21 corridors (29%) during the PM peak period.

Table 15: Speed Relative to the Posted Speed

Corridor No.	Road	AM Peak Period												PM Peak Period											
		Northbound/Eastbound						Southbound/Westbound						Northbound/Eastbound						Southbound/Westbound					
		Exceeds Posted Spd.			At/Below Posted Spd			Exceeds Posted Spd.			At/Below Posted Spd			Exceeds Posted Spd.			At/Below Posted Spd			Exceeds Posted Spd.			At/Below Posted Spd		
		Before	After	Δ	Before	After	Δ	Before	After	Δ	Before	After	Δ	Before	After	Δ	Before	After	Δ	Before	After	Δ	Before	After	Δ
1	Hiwassee Road	56%	53%	3%	44%	47%	-3%	37%	45%	-9%	63%	55%	9%	37%	39%	-2%	63%	61%	2%	38%	41%	-3%	62%	59%	3%
2	Metrowest Boulevard	47%	45%	2%	53%	55%	-2%	34%	33%	1%	66%	67%	-1%	34%	34%	1%	66%	66%	-1%	34%	32%	1%	66%	68%	-1%
3	Universal Boulevard	80%	67%	12%	20%	33%	-12%	67%	61%	6%	33%	39%	-6%	72%	70%	2%	28%	30%	-2%	66%	65%	2%	34%	35%	-2%
4	Millenia Blvd	37%	34%	4%	63%	66%	-4%	61%	68%	-7%	39%	32%	7%	26%	28%	-2%	74%	72%	2%	43%	47%	-4%	57%	53%	4%
5	Vineland Road	36%	35%	1%	64%	65%	-1%	33%	39%	-6%	67%	61%	6%	25%	29%	-4%	75%	71%	4%	24%	35%	-11%	76%	65%	11%
6	Apopka Vineland Road	64%	63%	1%	36%	37%	-1%	41%	44%	-3%	59%	56%	3%	42%	45%	-4%	58%	55%	4%	43%	53%	-9%	57%	47%	9%
7	Conroy Windermere Road	70%	64%	6%	30%	36%	-6%	44%	44%	0%	56%	56%	0%	48%	48%	0%	52%	52%	0%	29%	38%	-9%	71%	62%	9%
8 ¹	Good Homes Road/Old Winter Garden Road	32%	34%	-2%	68%	66%	2%	41%	33%	8%	59%	67%	-8%	35%	37%	-3%	65%	63%	3%	34%	39%	-5%	66%	61%	5%
8A	SR 408 WB Ramps to Kirkman Road	33%	40%	-7%	67%	60%	7%	51%	37%	14%	49%	63%	-14%	36%	28%	8%	64%	72%	-8%	49%	47%	2%	51%	53%	-2%
8B	Kirkman Road to Ferguson Drive	31%	29%	3%	69%	71%	-3%	31%	29%	2%	69%	71%	-2%	33%	47%	-14%	67%	53%	14%	19%	30%	-12%	81%	70%	12%
9 ¹	West Road/Clarcona Ocoee Road	73%	64%	9%	27%	36%	-9%	77%	75%	2%	23%	25%	-2%	70%	72%	-2%	30%	28%	2%	66%	72%	-6%	34%	28%	6%
9A	SR 408 WB Ramps to Kirkman Road	89%	90%	0%	11%	10%	0%	89%	91%	-3%	11%	9%	3%	92%	94%	-2%	8%	6%	2%	92%	96%	-4%	8%	4%	4%
9B	Kirkman Road to Ferguson Drive	56%	39%	18%	44%	61%	-18%	65%	58%	7%	35%	42%	-7%	49%	51%	-2%	51%	49%	2%	41%	49%	-8%	59%	51%	8%
10 ¹	Beggs Road/Edgewater Drive	25%	27%	-2%	75%	73%	2%	30%	37%	-7%	70%	63%	7%	25%	23%	1%	75%	77%	-1%	23%	24%	-1%	77%	76%	1%
10A	Overland Road to Mott Avenue	10%	10%	-1%	90%	90%	1%	14%	21%	-7%	86%	79%	7%	14%	12%	2%	86%	88%	-2%	20%	20%	0%	80%	80%	0%
10B	Mott Avenue to All American Boulevard	40%	44%	-3%	60%	56%	3%	46%	53%	-7%	54%	47%	7%	36%	35%	1%	64%	65%	-1%	26%	28%	-2%	74%	72%	2%
11	John Young Parkway	75%	89%	-13%	25%	11%	13%	84%	92%	-8%	16%	8%	8%	76%	84%	-8%	24%	16%	8%	80%	85%	-5%	20%	15%	5%
12 ²	SR 426	40%	43%	-2%	60%	57%	2%	29%	30%	0%	71%	70%	0%	38%	47%	-9%	62%	53%	9%	36%	33%	4%	64%	67%	-4%
13 ²	SR 434	42%	51%	-10%	58%	49%	10%	54%	68%	-14%	46%	32%	14%	49%	49%	0%	51%	51%	0%	58%	69%	-11%	42%	31%	11%
14 ²	US17/92	36%	38%	-2%	64%	62%	2%	14%	39%	-26%	86%	61%	26%	45%	37%	8%	55%	63%	-8%	38%	30%	8%	62%	70%	-8%
15 ²	SR 436	37%	41%	-5%	63%	59%	5%	53%	47%	6%	47%	53%	-6%	39%	48%	-9%	61%	52%	9%	59%	58%	1%	41%	42%	-1%
16 ²	SR 434	44%	53%	-9%	56%	47%	9%	37%	44%	-8%	63%	56%	8%	38%	45%	-7%	62%	55%	7%	40%	58%	-18%	60%	42%	18%
17 ³	Sand Lake Road (Weekday)	17%	19%	-1%	83%	81%	1%	54%	51%	3%	46%	49%	-3%	23%	25%	-2%	77%	75%	2%	51%	57%	-7%	49%	43%	7%
	Sand Lake Road (Weekend)	40%	39%	0%	60%	61%	0%	68%	68%	0%	32%	32%	0%	48%	45%	3%	52%	55%	-3%	74%	73%	1%	26%	27%	-1%
18	US 192	38%	47%	-9%	62%	53%	9%	37%	35%	2%	63%	65%	-2%	33%	34%	-1%	67%	66%	1%	29%	29%	0%	71%	71%	0%
19	CR 532	17%	15%	3%	83%	85%	-3%	20%	22%	-2%	80%	78%	2%	8%	14%	-6%	92%	86%	6%	10%	16%	-7%	90%	84%	7%
20	Good Homes Road	10%	9%	1%	90%	91%	-1%	4%	3%	0%	96%	97%	0%	2%	4%	-2%	98%	96%	2%	2%	2%	0%	98%	98%	0%
21	Pine Hills Road	57%	55%	2%	43%	45%	-2%	57%	45%	12%	43%	55%	-12%	48%	52%	-5%	52%	48%	5%	42%	47%	-5%	58%	53%	5%
22	Maitland Avenue	53%	59%	-5%	47%	41%	5%	40%	46%	-6%	60%	54%	6%	48%	43%	5%	52%	57%	-5%	46%	53%	-7%	54%	47%	7%
23	Hiwassee Road (Apopka)	21%	33%	-13%	79%	67%	13%	41%	54%	-13%	59%	46%	13%	15%	17%	-1%	85%	83%	1%	33%	31%	2%	67%	69%	-2%
24	Hiwassee Road (Orange)	55%	53%	3%	45%	47%	-3%	48%	45%	3%	52%	55%	-3%	47%	54%	-7%	53%	46%	7%	56%	51%	5%	44%	49%	-5%
25	Park Avenue	70%	72%	-1%	30%	28%	1%	59%	58%	2%	41%	42%	-2%	61%	63%	-2%	39%	37%	2%	54%	48%	5%	46%	52%	-5%
26	Vick Road	20%	19%	1%	80%	81%	-1%	3%	2%	1%	97%	98%	-1%	21%	17%	4%	79%	83%	-4%	4%	4%	0%	96%	96%	0%

¹Corridor was split into multiple parts for analysis based on corridor goals. ²Retimed only for the weekend. ³Retimed for the weekday and weekend.

*Data collected on Saturday and Sunday are presented in the AM and PM columns, respectively

Table 16: AM Peak Period Maximum Speed Travelled over Posted Speed Limit

Corridor No.	Name	Northbound/Eastbound												Southbound/Westbound											
		At/Below Posted			Exceeds Posted			Exceeds Posted <5 mph			Exceeds Posted <10 mph			At/Below Posted			Exceeds Posted			Exceeds Posted <5 mph			Exceeds Posted <10 mph		
		Before	After	Δ	Before	After	Δ	Before	After	Δ	Before	After	Δ	Before	After	Δ	Before	After	Δ	Before	After	Δ	Before	After	Δ
1	Hiawassee Road	15%	19%	-4%	22%	22%	0%	36%	32%	4%	27%	27%	0%	10%	6%	4%	41%	24%	17%	30%	43%	-13%	18%	27%	-8%
2	Metrowest Boulevard	15%	13%	2%	40%	42%	-2%	30%	34%	-3%	15%	11%	3%	36%	33%	4%	32%	38%	-6%	23%	21%	2%	8%	8%	0%
3	Universal Boulevard	0%	0%	0%	0%	8%	-8%	17%	21%	-4%	83%	71%	12%	0%	0%	0%	0%	0%	0%	0%	18%	-18%	100%	82%	18%
4	Millenia Blvd	0%	0%	0%	9%	15%	-7%	38%	34%	4%	54%	51%	3%	1%	1%	0%	15%	13%	2%	41%	48%	-7%	43%	38%	5%
5	Vineland Road	48%	48%	0%	27%	32%	-5%	17%	14%	3%	8%	6%	2%	39%	38%	1%	40%	34%	6%	17%	20%	-3%	4%	8%	-4%
6	Apopka Vineland Road	1%	1%	0%	20%	15%	5%	39%	43%	-4%	39%	40%	-1%	3%	5%	-2%	23%	19%	4%	44%	41%	2%	31%	35%	-4%
7	Conroy Windermere Road	1%	0%	1%	4%	3%	1%	14%	16%	-2%	81%	80%	1%	1%	0%	1%	7%	8%	-1%	23%	22%	1%	69%	70%	0%
8 ¹	Good Homes Road/Old Winter Garden Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8A	SR 408 WB Ramps to Kirkman Road	11%	4%	7%	44%	23%	21%	0%	20%	-20%	44%	52%	-8%	0%	0%	0%	24%	45%	-22%	17%	14%	4%	59%	41%	18%
8B	Kirkman Road to Ferguson Drive	3%	5%	-2%	22%	21%	1%	40%	39%	1%	34%	35%	-1%	16%	13%	4%	40%	44%	-4%	32%	29%	3%	12%	14%	-2%
9 ¹	West Road/Clarcona Ocoee Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9A	SR 408 WB Ramps to Kirkman Road	0%	0%	0%	2%	0%	2%	8%	3%	5%	90%	97%	-7%	0%	0%	0%	0%	0%	0%	9%	4%	5%	91%	96%	-5%
9B	Kirkman Road to Ferguson Drive	2%	2%	-1%	17%	30%	-13%	46%	46%	0%	36%	22%	14%	2%	1%	1%	14%	20%	-6%	45%	53%	-8%	40%	26%	14%
10 ¹	Beggs Road/Edgewater Drive	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10A	Overland Road to Mott Avenue	56%	43%	14%	28%	42%	-13%	12%	11%	0%	4%	4%	-1%	58%	27%	31%	29%	48%	-19%	10%	19%	-9%	3%	6%	-3%
10B	Mott Avenue to All American Boulevard	23%	15%	8%	41%	43%	-2%	23%	26%	-3%	13%	16%	-3%	12%	13%	-1%	27%	24%	3%	37%	31%	5%	25%	32%	-7%
11	John Young Parkway	0%	0%	0%	1%	0%	1%	9%	5%	4%	90%	95%	-5%	0%	0%	0%	1%	0%	1%	5%	3%	2%	93%	97%	-3%
12 ²	SR 426	7%	1%	6%	52%	58%	-6%	27%	33%	-6%	14%	8%	6%	11%	9%	2%	38%	51%	-13%	43%	31%	12%	8%	9%	-1%
13 ²	SR 434	0%	0%	0%	4%	0%	4%	33%	26%	7%	63%	74%	-11%	0%	0%	0%	15%	14%	1%	34%	25%	9%	52%	61%	-9%
14 ²	US17/92	8%	5%	3%	8%	1%	7%	21%	22%	-1%	63%	72%	-9%	30%	12%	18%	44%	59%	-16%	21%	25%	-4%	5%	3%	2%
15 ²	SR 436	1%	1%	0%	17%	25%	-8%	53%	46%	7%	29%	27%	1%	1%	2%	-1%	18%	21%	-2%	39%	51%	-11%	41%	27%	15%
16 ²	SR 434	0%	6%	-6%	31%	22%	9%	61%	39%	22%	8%	34%	-26%	0%	0%	0%	44%	13%	31%	50%	60%	-10%	6%	27%	-21%
17 ³	Sand Lake Road (Weekday)	8%	6%	1%	48%	51%	-3%	36%	37%	-2%	8%	5%	3%	13%	15%	-2%	57%	54%	3%	28%	27%	1%	3%	4%	-2%
	Sand Lake Road (Weekend)	0%	0%	0%	22%	24%	-2%	59%	52%	7%	19%	24%	-5%	5%	7%	-3%	44%	44%	0%	40%	42%	-1%	11%	7%	4%
18	US 192	0%	1%	-1%	22%	19%	2%	51%	41%	10%	27%	38%	-12%	2%	1%	0%	27%	25%	2%	49%	52%	-3%	23%	22%	1%
19	CR 532	3%	11%	-7%	32%	32%	1%	61%	39%	22%	3%	18%	-15%	5%	0%	5%	10%	14%	-4%	41%	47%	-5%	44%	40%	4%
20	Good Homes Road	72%	70%	2%	23%	27%	-4%	4%	2%	2%	1%	1%	0%	85%	87%	-2%	15%	11%	4%	1%	2%	-1%	0%	0%	0%
21	Pine Hills Road	0%	2%	-2%	13%	17%	-4%	29%	37%	-7%	58%	45%	13%	0%	3%	-3%	13%	25%	-12%	32%	37%	-5%	55%	35%	20%
22	Maitland Avenue	17%	0%	17%	44%	63%	-19%	26%	19%	7%	13%	19%	-5%	19%	15%	3%	51%	52%	-1%	23%	31%	-8%	7%	2%	5%
23	Hiawassee Road (Apopka)	32%	25%	7%	32%	40%	-8%	22%	18%	4%	14%	17%	-3%	37%	26%	11%	35%	37%	-2%	23%	25%	-2%	5%	12%	-7%
24	Hiawassee Road (Orange)	4%	3%	1%	13%	12%	1%	27%	28%	-2%	57%	57%	-1%	1%	1%	0%	7%	12%	-5%	34%	29%	5%	58%	58%	0%
25	Park Avenue	6%	5%	1%	44%	48%	-4%	37%	39%	-1%	12%	8%	4%	13%	9%	3%	27%	38%	-11%	43%	35%	7%	18%	18%	0%
26	Vick Road	19%	34%	-14%	40%	31%	9%	23%	29%	-6%	19%	7%	12%	94%	96%	-2%	5%	3%	2%	1%	1%	0%	0%	0%	0%

¹Corridor was split into multiple parts for analysis based on corridor goals. ²Retimed only for the weekend. ³Retimed for the weekday and weekend. *Data collected on Saturday and Sunday are presented in the AM and PM columns, respectively

Table 17: PM Peak Period Maximum Speed Travelled over Posted Speed Limit

Corridor No.	Name	Northbound/Eastbound												Southbound/Westbound											
		At/Below Posted			Exceeds Posted			Exceeds Posted <5 mph			Exceeds Posted <10 mph			At/Below Posted			Exceeds Posted			Exceeds Posted <5 mph			Exceeds Posted <10 mph		
		Before	After	Δ	Before	After	Δ	Before	After	Δ	Before	After	Δ	Before	After	Δ	Before	After	Δ	Before	After	Δ	Before	After	Δ
1	Hiwassee Road	21%	20%	1%	37%	30%	7%	25%	34%	-8%	16%	16%	1%	10%	9%	1%	29%	30%	-1%	47%	42%	5%	14%	19%	-5%
2	Metrowest Boulevard	27%	20%	6%	40%	47%	-7%	23%	24%	-1%	10%	9%	2%	29%	36%	-7%	40%	39%	1%	24%	19%	6%	6%	6%	0%
3	Universal Boulevard	0%	0%	0%	2%	3%	-1%	22%	25%	-4%	77%	72%	5%	0%	0%	0%	0%	3%	-3%	16%	33%	-18%	84%	64%	21%
4	Millenia Blvd	3%	1%	1%	23%	15%	8%	42%	47%	-5%	33%	37%	-4%	9%	4%	5%	33%	31%	2%	38%	38%	0%	20%	27%	-7%
5	Vineland Road	59%	51%	8%	25%	31%	-6%	12%	14%	-1%	4%	4%	0%	46%	35%	11%	36%	37%	-1%	12%	18%	-6%	6%	9%	-3%
6	Apopka Vineland Road	3%	4%	-1%	28%	26%	2%	45%	44%	0%	24%	25%	-1%	2%	2%	0%	17%	15%	2%	48%	45%	3%	33%	39%	-6%
7	Conroy Windermere Road	2%	2%	0%	19%	9%	10%	34%	28%	6%	44%	61%	-17%	2%	2%	-1%	15%	13%	2%	36%	32%	4%	47%	53%	-5%
8 ¹	Good Homes Road/Old Winter Garden Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8A	SR 408 WB Ramps to Kirkman Road	0%	17%	-17%	35%	51%	-15%	35%	8%	26%	30%	24%	6%	2%	6%	-4%	16%	15%	0%	53%	40%	13%	29%	39%	-9%
8B	Kirkman Road to Ferguson Drive	13%	6%	7%	33%	22%	11%	28%	38%	10%	26%	34%	-8%	34%	26%	8%	42%	41%	1%	17%	24%	-7%	7%	9%	-2%
9 ¹	West Road/Clarcona Ocoee Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9A	SR 408 WB Ramps to Kirkman Road	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%	0%	10%	2%	8%	90%	98%	-8%
9B	Kirkman Road to Ferguson Drive	5%	5%	0%	25%	23%	2%	41%	46%	-5%	30%	27%	3%	5%	4%	1%	33%	27%	5%	44%	47%	-3%	18%	22%	-4%
10 ¹	Beggs Road/Edgewater Drive	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10A	Overland Road to Mott Ave.	31%	42%	-11%	52%	42%	10%	14%	12%	2%	2%	3%	-1%	52%	40%	12%	34%	40%	-6%	12%	17%	-5%	2%	4%	-2%
10B	Mott Avenue to All American Boulevard	26%	22%	4%	39%	48%	-8%	23%	20%	3%	12%	11%	1%	38%	30%	8%	35%	40%	-5%	18%	22%	-4%	9%	8%	0%
11	John Young Parkway	0%	0%	0%	0%	1%	0%	7%	4%	2%	93%	95%	-2%	0%	1%	-1%	1%	0%	1%	8%	6%	2%	91%	93%	-2%
12 ²	SR 426	14%	8%	6%	48%	34%	13%	33%	41%	-9%	6%	16%	-10%	7%	8%	-1%	34%	49%	-15%	42%	38%	4%	17%	5%	12%
13 ²	SR 434	0%	0%	0%	3%	16%	-13%	30%	14%	16%	68%	70%	-2%	0%	0%	0%	8%	0%	8%	39%	42%	-3%	53%	58%	-6%
14 ²	US17/92	1%	2%	0%	2%	4%	-2%	24%	23%	1%	73%	71%	1%	10%	19%	-9%	54%	42%	12%	33%	36%	-4%	4%	3%	1%
15 ²	SR 436	1%	2%	-1%	19%	10%	9%	44%	53%	-9%	36%	34%	2%	0%	0%	0%	10%	15%	-4%	40%	46%	-7%	50%	39%	11%
16 ²	SR 434	0%	0%	0%	42%	33%	9%	35%	31%	4%	23%	36%	-12%	11%	0%	11%	39%	22%	18%	31%	28%	4%	19%	51%	32%
17 ³	Sand Lake Road (Weekday)	1%	1%	0%	34%	28%	6%	50%	51%	-2%	16%	20%	-4%	7%	7%	0%	55%	51%	4%	34%	37%	-3%	4%	5%	-1%
	Sand Lake Road (Weekend)	0%	0%	0%	13%	9%	5%	49%	62%	13%	38%	30%	8%	5%	4%	1%	43%	37%	6%	46%	53%	-7%	7%	7%	0%
18	US 192	1%	2%	-1%	21%	22%	-1%	53%	48%	5%	25%	28%	-4%	2%	5%	-2%	27%	30%	-3%	46%	40%	5%	25%	25%	0%
19	CR 532	10%	12%	-2%	21%	39%	-18%	38%	31%	7%	31%	19%	12%	6%	12%	-6%	24%	28%	-4%	45%	40%	5%	24%	20%	5%
20	Good Homes Road	94%	87%	7%	5%	11%	-7%	0%	1%	-1%	0%	0%	0%	93%	91%	2%	7%	8%	-1%	1%	1%	0%	0%	0%	0%
21	Pine Hills Road	0%	2%	-2%	15%	15%	0%	39%	44%	-5%	46%	39%	6%	1%	2%	-1%	24%	23%	1%	43%	42%	1%	32%	33%	-1%
22	Maitland Avenue	21%	30%	-9%	47%	48%	-1%	26%	22%	5%	6%	0%	6%	18%	11%	7%	49%	48%	1%	26%	40%	-14%	7%	0%	7%
23	Hiwassee Road (Apopka)	50%	39%	11%	24%	30%	-6%	16%	17%	-1%	10%	14%	-4%	52%	63%	10%	29%	23%	6%	14%	9%	5%	5%	6%	-1%
24	Hiwassee Road (Orange)	1%	0%	1%	18%	13%	5%	37%	37%	0%	44%	49%	-5%	0%	1%	-1%	6%	7%	-1%	28%	44%	-16%	65%	48%	18%
25	Park Avenue	17%	16%	2%	49%	49%	0%	28%	29%	-1%	5%	6%	-1%	13%	27%	14%	42%	33%	9%	29%	25%	4%	15%	15%	1%
26	Vick Road	52%	68%	-16%	26%	18%	8%	15%	10%	6%	7%	4%	3%	92%	92%	0%	7%	7%	-1%	1%	0%	1%	0%	0%	0%

¹Corridor was split into multiple parts for analysis based on corridor goals. ²Retimed only for the weekend. ³Retimed for the weekday and weekend. *Data collected on Saturday and Sunday are presented in the AM and PM columns, respectively

Pedestrian Delay

Pedestrian delay was calculated at all intersections. The average pedestrian delay for each corridor is shown in **Table 18**. A full list of the pedestrian delay for each intersection is attached in **Appendix D**. Pedestrian delay was determined using HCM 6th Edition Equation 19-70, as shown below.

$$d_p = \frac{(C - g_{walk,mi})^2}{2C}$$

If the phase providing service to the pedestrian is actuated with no rest in walk or pretimed,

$$g_{walk,mi} = Walk_{mi} + 4.0$$

If the phase providing service to the pedestrian is actuated and rest in walk is enabled,

$$g_{walk,mi} = D_{p,mi} - Y_{mi} - R_{c,mi} - PC_{mi} + 4.0$$

If there is no pedestrian signal head,

$$g_{walk,mi} = D_{p,mi} - Y_{mi} - R_{c,mi}$$

d_p = Pedestrian delay (sec/pedestrian)

C = Cycle length (sec)

$g_{walk,mi}$ = Effective walk time serving the minor-street through movement (sec)

$Walk_{mi}$ = Pedestrian walk setting for the phase serving the minor-street through movement (sec)

$D_{p,mi}$ = Duration of the phase serving the minor-street through movement (sec)

Y_{mi} = Yellow change interval of the phase serving the minor-street through movement (sec)

$R_{c,mi}$ = Red clearance interval of the phase serving the minor-street through movement (sec)

PC_{mi} = Pedestrian clear setting for the phase serving the minor-street through movement (sec)

The corridor retiming projects resulted in reducing the average pedestrian intersection delay at 4 of 21 corridors (19%) during the AM peak period and 7 of 21 corridors (33%) during the PM peak period.

Table 18: Pedestrian Delay

Int ID	Intersection Name	Average Pedestrian Delay (sec)					
		AM (7-9 AM)			PM (4-6 PM)		
		Before	After	Δ	Before	After	Δ
1	Hiawassee Road	72.3	72.3	0.0	77.9	77.9	0.0
2	Metrowest Boulevard	64.4	64.4	0.0	69.4	69.4	0.0
3	Universal Boulevard	47.0	47.0	0.0	43.1	43.1	0.0
4	Millenia Blvd	63.0	68.3	(5.3)	84.2	78.9	5.3
5	Vineland Road	43.8	56.4	(12.5)	42.5	65.1	(22.5)
6	Apopka Vineland Road	68.8	73.7	(5.0)	78.7	84.3	(5.6)
7	Conroy Windermere Road	83.3	83.3	0.0	91.8	95.2	(3.4)
8 ¹	Good Homes Road/Old Winter Garden Road	62.2	68.1	(5.9)	73.7	74.0	(0.3)
8A	SR 408 WB Ramps to Kirkman Road	65.4	74.4	(9.0)	79.3	78.8	0.5
8B	Kirkman Road to Ferguson Drive	56.9	57.8	(0.9)	64.3	66.1	(1.7)
9 ¹	West Road/Clarcona Ocoee Road	53.4	66.7	(13.3)	62.3	79.3	(17.0)
9A	SR 408 WB Ramps to Kirkman Road	50.2	80.9	(30.7)	47.9	80.9	(33.0)
9B	Kirkman Road to Ferguson Drive	54.2	62.8	(8.6)	66.2	78.8	(12.6)
10 ¹	Beggs Road/Edgewater Drive	68.1	71.2	(3.1)	78.7	70.9	7.8
10A	Overland Road to Mott Avenue	65.8	57.8	8.0	69.8	60.7	9.1
10B	Mott Avenue to All American Boulevard	70.4	84.6	(14.3)	87.6	81.2	6.4
11	John Young Parkway	66.2	71.0	(4.8)	74.1	75.7	(1.6)
12 ²	SR 426	64.7	64.7	0.0	64.7	64.9	(0.2)
13 ²	SR 434	69.3	66.6	2.7	69.3	66.6	2.7
14 ²	US17/92	91.6	49.5	42.1	108.2	91.1	17.1
15 ²	SR 436	69.4	69.4	0.0	69.4	69.4	0.0
16 ²	SR 434	69.3	66.6	2.7	69.3	66.6	2.7
17 ³	Sand Lake Road (Weekday)	69.6	67.2	2.4	112.4	102.3	10.1
	Sand Lake Road (Weekend)	76.7	72.4	4.2	76.7	72.4	4.2
18	US 192	73.7	86.9	(13.2)	92.6	88.3	4.3
19	CR 532	79.0	59.4	19.6	89.0	69.3	19.6
20	Good Homes Road	34.7	34.7	0.0	40.5	40.5	0.0
21	Pine Hills Road	43.8	43.8	0.0	46.6	46.6	0.0
22	Maitland Avenue	71.5	69.1	2.4	71.5	69.1	2.4
23	Hiawassee Road (Apopka)	89.3	89.3	0.0	79.3	79.3	0.0
24	Hiawassee Road (Orange)	66.7	67.3	(0.6)	73.7	71.9	1.8
25	Park Avenue	44.4	43.8	0.6	36.4	50.0	(13.6)
26	Vick Road	67.2	72.2	(5.0)	67.2	82.2	(15.0)

¹Corridor was split into multiple parts for analysis based on corridor goals. ²Retimed only for the weekend. ³Retimed for the weekday and weekend.

*Data collected on Saturday and Sunday are presented in the AM and PM columns, respectively

Benefit-Cost Analysis

The project team assessed the travel time benefits and project costs to evaluate the overall benefit-cost of each corridor retiming project and of the corridor retiming program as a whole.

Benefits

Several measures of effectiveness may be used to assess the benefits of the retiming projects, including all of the metrics analyzed in the retiming. Vehicle travel time is used in this analysis for directly measuring and monetizing the benefits of retiming, but additional societal benefits are captured with the range of measures used in this analysis and should be considered when looking at the overall benefit of signal retiming.

The daily travel time savings, taken from the AM and PM peak hours, were previously presented for each corridor in **Table 6**. These travel time savings are expected to be experienced daily on each corridor for approximately 300 days per year (estimated days with observable AM and PM peaking characteristics).

The travel time savings for corridors retimed during the weekend are calculated considering a two-hour peak period on Saturday and Sunday. Saturday and Sunday are considered separately for the purposes of calculating travel time savings. The analysis considers 52 weekends per year (52 Saturdays and 52 Sundays).

The corridor retiming projects provided an estimated travel time savings of 455 vehicle-hours per weekday and 61 vehicle-hours per weekend day.

The annual travel time savings (vehicle-hours) are translated into monetary benefits through unit costs obtained from the *2021 Urban Mobility Report* published by Texas A&M Transportation Institute (TTI). The monetary value of time is valued at \$20.17 per hour in that report.

The annual monetary benefits were converted to a present value monetary benefit assuming a three-year project life and an interest rate of four percent (*FDOT Design Manual*, January 2021, Chapter 122). The assumptions used regarding the monetary benefits estimation over the life of the project are summarized in **Table 19**.

Table 19: Monetary Benefit Assumptions

MOE Values	Unit Value	Source
Delay	\$20.17 per hour	2021 Urban Mobility Report (TTI)
Weekday Daily Benefit	2 hours	Calculated for one AM peak hour and one PM peak hour
Weekdays per Year	300 days	Estimated days with AM & PM peaking characteristics
Weekend Daily Benefit	2 hours	Calculated for a two-hour peak period on Saturday and Sunday
Saturdays/Sundays per Year	52 days each	Estimated Saturdays and Sundays with travel time benefit
Project Life	3 years	Estimated life of project benefits
Interest Rate	4 percent	FDOT Design Manual, Chapter 122

Costs

The project costs for the corridor retiming projects were provided by MetroPlan Orlando. Costs were provided on an individual corridor basis. The project costs are present value costs and therefore needed no further adjustment.

Benefit-Cost Ratio

The benefit-cost ratio is calculated for each corridor by dividing the present value user benefit of the improvement by the project cost. Where corridors were divided into separate segments, due to a goal other than improving end-to-end travel time along the corridor, the segment travel time savings were summed to calculate the total corridor travel time savings for use in the benefit/cost analysis.

The benefit-cost ratio for each corridor retiming project is summarized in **Table 20**.

Considering only the metrics for peak period corridor travel time, the retiming projects provided overall benefit-cost ratios in excess of one for 20 of 27 projects (74%), with benefit-cost ratios ranging from 1.0 to 30.1. Three (3) projects had a benefit-cost ratio between zero and one.

The corridor retiming program is estimated to have a total present value benefit of approximately \$7,820,504 over the next three years. The total cost of the program was approximately \$995,742.

The benefit-cost ratio of the 2020/2021 corridor retiming program was 7.9.

Table 20: Benefit-Cost Summary

Corridor No.	Name	Daily Time Savings (veh-hr)	Benefit		Project Cost	B/C Ratio
			Annual	Present Value		
1	Hiwassee Road	1	\$5,428	\$15,062	\$21,378.17	0.7
2	Metrowest Boulevard	8	\$48,320	\$134,094	\$21,378.17	6.3
3	Universal Boulevard	(3)	(\$19,792)	(\$54,926)	\$38,443.01	(1.4)
4	Millenia Blvd	15	\$87,859	\$243,818	\$24,424.74	10.0
5	Vineland Road	5	\$29,025	\$80,546	\$24,424.74	3.3
6	Apopka Vineland Road	12	\$73,099	\$202,857	\$47,495.23	4.3
7	Conroy Windermere Road	54	\$323,807	\$898,595	\$32,496.32	27.7
8	Good Homes Road/Old Winter Garden Road	32	\$195,611	\$542,839	\$83,996.38	6.5
9	West Road/Clarcona Ocoee Road	30	\$182,110	\$505,373	\$79,066.42	6.4
10	Beggs Road/Edgewater Drive	4	\$26,068	\$72,340	\$34,267.37	2.1
11	John Young Parkway	111	\$670,981	\$1,862,032	\$71,504.89	26.0
12 ¹	SR 426	12	\$12,976	\$36,008	\$35,851.15	1.0
13 ¹	SR 434	12	\$12,283	\$34,088	\$55,937.01	0.6
14 ¹	US17/92	(10)	(\$10,765)	(\$29,873)	\$9,396.75	(3.2)
15 ¹	SR 436	33	\$34,198	\$94,902	\$35,203.15	2.7
16 ¹	SR 434	12	\$12,443	\$34,531	\$31,239.51	1.1
17 ²	Sand Lake Road (Weekday)	1	\$7,269	\$20,171	\$19,506.51	1.0
	Sand Lake Road (Weekend)	3	\$3,048	\$8,458	\$19,506.51	0.4
18	US 192	61	\$366,452	\$1,016,937	\$58,344.88	17.4
19	CR 532	69	\$417,388	\$1,158,291	\$38,488.84	30.1
20	Good Homes Road	(1)	(\$4,727)	(\$13,119)	\$21,491.00	(0.6)
21	Pine Hills Road	70	\$424,718	\$1,178,630	\$48,266.00	24.4
22	Maitland Avenue	20	\$123,243	\$342,009	\$26,274.00	13.0
23	Hiwassee Road (Apopka)	(5)	(\$32,546)	(\$90,318)	\$21,491.00	(4.2)
24	Hiwassee Road (Orange)	(13)	(\$77,201)	(\$214,239)	\$64,554.00	(3.3)
25	Park Avenue	(10)	(\$59,835)	(\$166,048)	\$15,658.50	(10.6)
26	Vick Road	(6)	(\$33,352)	(\$92,555)	\$15,658.50	(5.9)
TOTAL		516	\$2,818,107.31	\$7,820,504.34	\$995,742.74	7.9

¹Retimed only for the weekend. ²Retimed for the weekday and weekend. *B/C analysis only considers peak period driver corridor travel time metric

Summary of Performance Measures

This evaluation concludes the MetroPlan Orlando annual signal retiming program continues to be a valuable TSMO strategy and continued to yield positive results in 2020/2021. The program benefits are more than seven times the program’s overall cost. A summary of all of the performance measures for each corridor is provided below in **Table 21**.

Table 21: Summary of Performance Measures

Corridor No.	Name	Change in Corridor Travel Time (veh-hr)	B/C Ratio	Change in Overall Reliability	Reduction in Fuel Consumption (gal/yr)	Reduction in Emissions (tons/yr)	Change in Average Intersection Delay (sec/veh)	Change in Number of Stops (#)	Change in Number of Slow Downs (#)	Change in Vehicles Exceeding Speed Limit (%)	Change in Average Pedestrian Delay (sec)	
1	Hiwassee Road	1	0.7	Reliable to Reliable	234	2.3	(5)	(0.1)	(0.3)	-3%	0.0	
2	Metrowest Boulevard	8	6.3	Reliable to Reliable	2,084	20.2	6	0.2	0.0	1%	0.0	
3	Universal Boulevard	(3)	(1.4)	Reliable to Reliable	(854)	(8.3)	(9)	(0.2)	(0.4)	5%	0.0	
4	Millenia Blvd	15	10.0	Reliable to Reliable	3,790	36.8	12	0.3	0.1	-2%	0.0	
5	Vineland Road	5	3.3	Unreliable to Unreliable	1,252	12.1	(4)	0.2	0.3	-5%	(17.5)	
6	Apopka Vineland Road	12	4.3	Reliable to Reliable	3,153	30.6	13	0.4	0.5	-4%	(5.3)	
7	Conroy Windermere Road	54	27.7	Reliable to Unreliable	13,967	135.5	19	0.7	0.6	-1%	(1.7)	
8 ¹	Good Homes Road/Old Winter Garden Road	32	6.5	Reliable to Reliable	8,437	81.8	(45)	0.0	(1.8)	0%	(3.1)	
9 ¹	West Road/Clarcona Ocoee Road	30	6.4	Reliable to Reliable	7,855	76.2	(45)	1.6	2.5	1%	(15.2)	
10 ¹	Beggs Road/Edgewater Drive	4	2.1	Unreliable to Unreliable	1,124	10.9	1	0.2	(0.6)	-2%	2.3	
11	John Young Parkway	111	26.0	Reliable to Reliable	28,942	280.7	4	1.5	1.6	-8%	(3.2)	
12 ²	SR 426	12	1.0	Reliable to Reliable	560	5.4	6	(0.0)	0.2	-2%	(0.1)	
13 ²	SR 434	12	0.6	Reliable to Reliable	530	5.1	(2)	(0.6)	(0.3)	-9%	2.7	
14 ²	US17/92	(10)	(3.2)	Unreliable to Reliable	(464)	(4.5)	(7)	0.3	0.2	-3%	29.6	
15 ²	SR 436	33	2.7	Reliable to Reliable	1,475	14.3	(16)	0.4	0.3	-2%	0.0	
16 ²	SR 434	12	1.1	Reliable to Reliable	537	5.2	10	1.9	2.2	-10%	2.7	
17 ³	Sand Lake Road (Weekday)	1	1.0	Reliable to Reliable	314	3.0	53	0.1	0.1	-2%	6.3	
	Sand Lake Road (Weekend)	3	0.4	Reliable to Reliable	131	1.3	2	0.1	0.3	1%	4.2	
18	US 192	61	17.4	Reliable to Reliable	15,806	153.3	22	1.2	1.3	-2%	(4.5)	
19	CR 532	69	30.1	Reliable to Unreliable	18,003	174.6	(1)	0.1	0.1	-3%	19.6	
20	Good Homes Road	(1)	(0.6)	Reliable to Reliable	(204)	(2.0)	12	(0.1)	(0.1)	0%	0.0	
21	Pine Hills Road	70	24.4	Reliable to Reliable	18,319	177.7	(2)	0.9	0.4	1%	0.0	
22	Maitland Avenue	20	13.0	Reliable to Reliable	5,316	51.6	7	0.3	0.4	-3%	2.4	
23	Hiwassee Road (Apopka)	(5)	(4.2)	Unreliable to Unreliable	(1,404)	(13.6)	4	0.2	0.1	-6%	0.0	
24	Hiwassee Road (Orange)	(13)	(3.3)	Reliable to Reliable	(3,330)	(32.3)	34	(0.4)	(0.9)	1%	0.6	
25	Park Avenue	(10)	(10.6)	Reliable to Unreliable	(2,581)	(25.0)	8	0.0	0.1	1%	(6.5)	
26	Vick Road	(6)	(5.9)	Unreliable to Unreliable	(1,439)	(14.0)	1	(0.1)	0.0	1%	(10.0)	
OVERALL PROGRAM TOTAL:		516	7.9	-	121,554	1,179	AVERAGE:	3	0.2	0.1	-2%	0.1

¹Corridor was split into multiple parts for analysis based on corridor goals. ²Retimed only for the weekend. ³Retimed for the weekday and weekend.

*Data collected on Saturday and Sunday are presented in the AM and PM columns, respectively

**Appendix A: CV Methodology
Memorandum**

Appendix B: Traffic Volumes

Appendix C: School Intersection Delay Queue Studies

Appendix D: Pedestrian Delay By Intersection